Elevating the Role of Creativity, Identity, and Voice in Literacy

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ALER

Association of Literacy
Educators & Researchers

Elevating the Role of Creativity, Identity, and Voice in Literacy

The Forty-Fourth Yearbook: A Double Peer-Reviewed Publication of the Association of Literacy Educators and Researchers

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From the authors to the reviewers, university and personal support, this publication underscores each person's contribution towards understanding and elevating creativity, identity, and voice through our literacies and for our communities.

—Alexandra Babino, Nedra Cossa, Kathryn Dixon, and Juan J. Araujo

Introduction

The theme for the 44th yearbook of the Association of Literacy Educators and Researchers is "Elevating the Role of Creativity, Identity, and Voice in Literacy," an apropos response to the three pandemics facing the U.S. communities and schools over the past several years. It represents a robust and humanizing next step to the increased police brutality, acceptance of alternative facts, and uplifting of parental choice to ban books that primarily target texts featuring historically marginalized groups. At both the micro and macro levels, the articles in this year's yearbook suggest myriad iterations of creativity, identity, and voice in literacy practice and research from the 2022 conference.

President of ALER, Dr. Tammy C. Francis's 2022 ALER conference presidential address proposes how literacy educators and researchers can leverage technology and innovation in our future schoolscapes. In particular, Dr. Francis beckons us to retool and uptool our own professional development with a plethora of Web 3.0 tools. The invited manuscript by Dr. Grote-García and colleagues, *How is Dyslexia Being Conceptualized Across State Lines? A Content Analysis of State Dyslexia Handbooks*, analyzes the most commonly used definitions of dyslexia across the United States, further highlighting the vast differences in definitions and proposed practices. Their findings reveal the variance and limited material, curriculum, assessment, and instructional support for fostering the literacies of dyslexic students, suggesting significant need for implementing proven supports across state lines. Sturtevant award winner, Dr. Sharon Leathers's counterstory, *Happy to Be Nappy: A Counterstory of a Black Woman, Literacy Professional Mapping "Nappy" as a Political and Social Discourse for Young, Black Girls in Schools*, exemplifies the role of creativity in research methods needed to push against the grain of master narratives and epistemologies. She rigorously and vulnerably details the freeing power of literacy via her voice to come to peace with her identity as a Black woman and literacy professional. Her work especially spotlights the intergenerational development of literacies centered on creativity and voice as she connects her own identity growth to elders in her community and she then becomes an

elder for future Black girls. Dissertation winner, Dr. Brady L. Nash's piece, *Building from Teachers' Knowledge: Co-Constructing Digital Literacy Conceptions Through Collaborative Online Professional Development*, keenly illustrates how case study research can be leveraged for meaningful digital literacies professional development in online contexts. Dr. Nash's work thus highlights the role of creativity in professional development with an emphasis on supporting teachers (and their voices) in the paradigmatic shifts necessary for teaching current and future literacies.

The subsequent sections of the yearbook are organized around how literacy educators and researchers may leverage a) languaging and literacies for equity, b) teacher identity and creativity in pedagogy, and c) creativity and complexity in literacy programs. Again, each article in this year's yearbook reveals myriad iterations of creativity, identity, and voice in literacy practice and research. Further, while we organize our colleagues' work along the lines of equity, pedagogy, and programs, we simultaneously realize these topics and the themes of creativity, identity, and voice reverberate all throughout each section. All of the articles within this Yearbook represent a portion of the sessions presented at the conference. After a peer-review process for conference acceptance, the ensuing articles underwent an additional two rounds of double-blind peer review before acceptance in the Yearbook. It is our sincere hope that the articles reflect the theme and embolden our practice as literacy educators and researchers. ¡Pa'lante!

—AB, NC, KD, & JA

PRESIDENTIAL ADDRESS

LEVERAGING TECHNOLOGY AND INNOVATION TO ELEVATE IDENTITY, CREATIVITY, OWNERSHIP, AND VOICE

Tammy C. Francis, Ph.D.
Del Mar College

Tammy Francis, Ph.D., *The Catalyst, is a global educator, strategist, consultant, researcher, author, and speaker. With a Ph.D. in Curriculum and Instruction, Dr. Tammy is also a tenured Associate Professor of Reading at Del Mar College. As an educator for more than 22 years, Dr. Tammy has taught in grades 6-12 and higher education classrooms. She helps adults improve their reading and writing skills as well as their ability to be successful in college and life. She offers her services as a consultant and professional developer to support educators in the secondary and post-secondary classroom to improve reading and writing instruction across the curriculum, as well as student success strategies. Dr. Francis also shares instructional strategies that create an engaged, equitable, and inclusive environment for students from diverse backgrounds. She develops and evaluates blockchain-based curriculum and educational programs, as well literacy-based curriculum and programs. She further delivers professional development and training to educational institutions with practical strategies for moving into the metaverse—establishing metaversities, or a digital twin.*

Dr. Tammy has a passion for the future of education and learning. She helps others move in the direction of more and prepare for what's next at pivotal moments

and through career transitions with purpose, on purpose. She helps others to reskill, upskill, and/or retool and remain competitive during the digital transformation. She empowers and equips leaders all over the world with purpose-driven, creative solutions while preparing for the future of work.

She also hosts monthly events, like Blockchain Empowered Conversations, where she creates pathways for Black and Brown communities to learn more about opportunities in blockchain and Web 3.0. Events discuss all things blockchain, tokenization, artificial intelligence, extended reality, metaverse, and more. Dr. Tammy is additionally active in several professional and community organizations, such Association of Literacy Educators and Researchers, National Organization of Student Success, Texas Association of Developmental Education, College Academic Support Programs, College Reading and Learning Association, Texas College Reading and Learning Association, Texas Association of African American Chamber of Commerce, and Corpus Christi Black Chamber of Commerce to name a few. Dr. Tammy is member of Zeta Phi Beta Sorority, Inc. Proudly, Dr. Tammy has won several awards during her career thus far, such as "Entrepreneur of the Year," "Teacher of the Year," "DisAbilities Advocate of the Year," and "The Jerry Johns Promising Researcher" awards. All that Dr. Tammy does is grounded in and inspired by her work and philosophy as a JEDI advocate (Justice, Equity, Diversity, and Inclusion >>> Belonging and Access).

Introduction

The COVID-19 pandemic created a surge of technology, innovation, and adoption. Within the next five years, the way we show up to work, where we work, the format of information we interact with, and the data we process will all be fundamentally different. Workplace transformation is causing employers (and employees) to rethink the need for flexible spaces. Not only is workplace transformation going to happen, but the information and processes will be datafied and digitized, which is known as a digital transformation (Hogarty, 2021; Kakirde, 2021; Nema, 2022).

The transformation will force us to explore the basic tenets of the future of education and learning, the future of work: data, decentralization, and automation. It will mandate the exploration of the role of blockchain technology, artificial intelligence (AI), and machine learning (ML). It is time to reconsider practices in the classroom and on campus, as well as our position on technology innovation.

Blockchain technology, AI, and ML will be impacting the way we teach, learn, and work–necessitating reskilling, upskilling, and retooling for the educational environment, not just jobs and careers. A futuristic look at education and learning is paramount. Ignoring emerging technologies and their impact on the future will negatively impact processes, productivity, and student success within our institutions.

This presidential address will highlight the emerging technology, technology innovation, and ways they are changing the future of work. I will examine how we can reimagine the future, education, learning, and work. Finally, I will discuss the talent gaps and skills necessary to be competitive in the future as we transition. It is my hope that Association for Literacy Educators and Researchers (ALER) members will leave this presidential address with realistic approaches to preparing for the future as well as current-use cases for technology which will serve as the catalyst for how you position yourselves and your students. I present reflective questions for determining how connected instructional practices and educational institutions are to the future of education and learning. Lastly, I offer recommendations for preparing for "what's next," the future. The Association for Literacy Educators and Researchers (ALER), as a professional organization, should lead in offering professional development opportunities to learn more about technology innovation in education and assist educators in creating curriculum, lessons, and instructional practices through a digital transformation lens.

On the Forefront of Policy, Pedagogy, and Practice

The purpose of Association for Literacy Educators and Researchers (ALER) is to stimulate self-development and personal growth to encourage continuing improvement of college and university curriculum and encourage preparation programs for teachers and reading specialists (www.aleronline.org). It also encourages the continuing improvement of administrative, clinical, diagnostic, and instructional practices related to the learning process (www.aleronline.org). While embarking upon this digital transformation and looking at how technology innovation will impact education, learning, and our literacy practices, the organization must also think about what we provide and make available to its members—on our website, at conferences, and on social media.

ALER seeks to stimulate the self-development and personal growth of professors, teachers, reading specialists, and students at all educational levels. We should be looking at it at all levels, so the organization's work and the members' work should be "at the forefront of policy, pedagogy, and practice" (www.aleronline.org). These three ideas guide ALER through its commitment and mission.

Technology and Innovation

Critical pedagogy views teaching as an inherently political act, rejects the neutrality of knowledge, and insists that the issues of social justice and democracy itself are not distinct from acts of teaching and learning (Giroux, 1997, 2007). This, of course, includes challenging students to examine the power of structures and

status quo in their surroundings. The innovation practices implemented should include freedom to express and sovereignty over identity, creativity, ownership, and voice—freedom from the limits on thought or behavior. Sovereignty and freedom are what technology innovation offers students, especially those from marginalized communities. Many of the technologies mentioned in this address also empower teachers, as educators and individuals to be advocates of literacy and learning while elevating the role of identity, creativity, ownership, and voice.

Emerging technologies are blockchain technology, cryptocurrency, digital wallets, metaverse, NFTS or non-fungible tokens, Web 3.0, machine learning, artificial intelligence, and virtual reality. Incorporating these technologies in education, learning, and literacy elevates our instructional practices. To "elevate" means to raise or lift something up to a higher level, to a higher position, or to raise to a more important or impressive level. The future is now. Accessibility to these technologies has been accelerated as a result of demands to remain competitive and function during the pandemic.

Before the pandemic, the World Economic Forum (2015) predicted 10% of the global gross domestic product store will be stored on the blockchain by 2027. PricewaterhouseCoopers's (PwC) *Time to Trust* report (2020) predicted that the blockchain technology could enhance around 40 million jobs globally by 2030. In Gartner industry report, Kandaswamy, Furlonger, and Stevens (2019) predicted that the blockchain industry will deliver a business value that reaches $176 billion by 2025 and $3.1 trillion by 2030. NFTs are now expected to grow to a $8 trillion industry (Ahmed, 2022). How do we prepare for the digital transformation?

Digital Transformation

Digital transformation is composed of four components: cultural, communication, talent, and technological (Nema, 2022). What are we creating? Are our curriculum practices supporting where we're going? Few people have been learning and implementing these technologies making this the perfect time to start learning more about the latest trends in edtech.

Questions to ponder:

1. How are these things beneficial to our policy, pedagogy, and practice, which is part of our mission statement?

2. Has your institution adequately invested in technology over the past five years?

3. What direction is education going in with regards to technology in your area, region, and institution?

4. Has your institution adequately invested in the technology and training for its employees, faculty, and staff over the last five years?

5. Where are the other opportunities to better utilize technology and literacy and learning? So where do you see these things fitting in?

Once you have answered those questions, which areas can be digitized, and go through a digital transformation? Decentralization and efficiency are key components. Decentralization in education is very controversial. However, where can your institution leverage new technology, like blockchain technology applications? Has there been a transition from outdated processes and adopted more automated and data-oriented systems? What are we doing to even make the transition, to improve on what we are doing both in the classroom and the institution?

Web 1.0 versus Web 2.0 versus Web 3.0

Web 1.0 was read only, such as web pages and email. This was the age of static web pages. Information was retrieved from servers. Web 1.0 was showing and presenting information like found on websites (Lisenbee et al., 2020). Web 2.0 refers to the current version of the internet. Web 2.0 has read and write capabilities and gained popularity through the sharing of videos. Video platforms and video producing apps entered the scene to share real world experiences in real time. Interactivity and social connectivity make it possible for user generated content, which can be viewed by millions of people around the world virtually, in an instant. This unparalleled reach has led to an explosion of this type of content in recent years by some popular apps like TikTok, Instagram, Facebook, and Twitter. Web 3.0 is the next iteration. The Web 3.0 phase of the evolution of the web or the internet could potentially be more disruptive and represent as big of a paradigm shift as Web 2.0. Web 3.0 is built on the core concepts of openness and greater user access and control. Web 3.0 is decentralized, open, and of greater utility. Users can retain control. It is decentralization, self-organization, ownership, digital ownership, transparency, and human connectivity (Furlonger & Uzureau, 2019).

Web 3.0 may include things like the Metaverse, which is a virtual reality immersive environment and non-fungible token (NFT), which is non interchangeable data, stored on the blockchain. Non-fungible tokens (NFTs) can be bought, sold, or traded. NFTs can represent real world projects and objects like art, music, in-game items, and videos. There are also more uses for digital currencies as also known as cryptocurrency (Brandon, 2020). Another technology that has moved into the forefront since December 2022 is artificial intelligence. Artificial intelligence has been around since 1956 when John McCarthy,

a researcher at Stanford University, coined the term (Kingsly, 2020). It is the ability of a computer, or a robot controlled by a computer, to do tasks that are usually done by humans because they require human intelligence and discernment. Artificial intelligence is the ability of a digital device or digitally controlled robot to perform tasks associated with human beings. Technology that provides almost real and/or believable experience in a synthetic or virtual way and capable of thinking, acting, and learning like humans (Kingsly, 2020). Still, all mental reality enhances the real world by superimposing computer generated information on top of it. This idea of interconnection via the internet of computing devices embedded in everyday objects enables them to send and receive data. Thermostats, cars, lights, refrigerators and so many more of so many other appliances can all be connected to the Internet of Things, which is also called IoT. Blockchain technology is one to watch. Blockchain technology is a distributed ledger technology. Distributed ledger technology shares its transaction records with multiple parties and maintains a record of all transactions of data, or "blocks," that take place between users (Sanchez, 2020). Blockchain technology uses an agreed upon (consensus) and encrypted process or cryptography (Brandon, 2020; Furlonger & Uzureau, 2019; Kingsly, 2020). It manages our data transactions and even our relationships differently. It avoids reliance on a central authority, so there is not one entity that controls it. There are also different types of blockchains. Once transactions on the blockchain, they are permanent and tamper proof, secure (Brandon, 2020; Furlonger & Uzureau, 2019; Kingsly, 2020). These are just some of the technologies that are emerging today.

Leveraging Opportunities

Technology and innovation present opportunities in literacy, education, and learning. The use-cases are limited, but the possibilities are limitless. Adoption requires a vision, an action plan, and a strategy.

Identity and Creativity: Blockchain Technology and Cryptocurrency

The future of education, literacy, and learning are degrees, credentialing, and certificates that are on the blockchain in a wallet which students' control—identity. Connecting ecosystems and incentivizing students with tokens (digital currency or cryptocurrency) is also the future. The future of literacy and learning is social mobility. It is this ability to change occupations or schools without having to worry about asking someone to send your credentials. Students have access through their wallet and own their data. Individuals can maintain their social

standing; it remains unchanged. Credentialing across multiple stakeholders with different ways of verifying information or learning is also the future. Stakeholders could be the education system, employers, or workforce. Transitions, such as college admissions or transferring colleges or schools, can be verified (Sanchez, 2020). How many times have those who are in the military or parents who are in the military are required to transfer schools because they are assigned to a new duty station? They could do that easily. Their records are accessible and follow them due to being in a wallet under the student's control. Plus, the data or records are on the blockchain. It can have a mass number of credentials that document learning and can be stored on it—not just one. They can store multiple and different types: credit bearing degrees, certificates, non-credit bearing offerings such as digital badges and apprenticeship awards. It also catalogs lifelong learning. The data suggests that individuals need to be lifelong learners to be successful (Lemoie & Soares, 2020; Sanchez, 2020). Blockchain technology and cryptocurrency allows for each person to document learning in addition to grow and pivot. Additionally, the learner can add to their other credentials. Technologies such as blockchain help solve this challenge of shifting control over to human capital, data from the stakeholders to the individual learners, the workers, and the citizens (Lemoie & Soares, 2020; Rivera, 2018; Sanchez, 2020). Instead of having to call the registrar for a transcript and records, students have access to their information, because it belongs to and is controlled by the user.

There are educational institutions around the country that are great use-cases for blockchain technology in education. They are creating ecosystems. For example, Dallas ISD, Dallas Community College District, UNT Dallas and Mesquite ISD make up a network built on existing relationships. They have an agreement, or Memorandums of Understanding (MOU). This network of schools use Greenlight, which is a private permission Hyperledger fabric blockchain to remove barriers for students to get into college and gain employment by giving them access and control over their verified academic records, transcripts, badges, certifications, references, recommendation letters, and even licenses that they have acquired (Sanchez, 2020).

Another example is Arizona State University and Maricopa County Community College District that are using a trusted Ledger network, a private permission, Hyperledger Sawtooth Blockchain by Sales Force. They use it for reverse transfers from Arizona State University to the community college, Maricopa County Community College (Lemoie & Soares, 2020). The process of getting an associate degree from a previously attended community college while attending a four-year institution and all that information is shared (Lemoie & Soares, 2020). So that's just a few use cases of how blockchain technology is used in education and learning.

Students are creative. They are artists, musicians, photographers, and more. Emerging technologies also allow education to elevate the role of creativity. NFT, or non-fungible token, is a unique and non-interchangeable unit of data stored on a blockchain or digital ledger which can be bought, sold, or traded with cryptocurrency. It is items such as music, art, photos, videos, very limited, or one-of-a-kind type of products can be stored. NFTs are public proof of ownership. Students have proof of ownership for whatever they have created, whether it is an art piece, musical piece, or photo. It also allows artists and content creators (the students) to monetize their wares in a decentralized way.

Ownership and Voice: Web 3.0, Community, and Decentralization

Elevating the role of ownership and voice are tenets of Web 3.0. Web 3.0 provides access to opportunities to enhance internal development. Embracing emerging technologies like blockchain technology, NFTs, cryptocurrency, and others is a paradigm shift. It is a shift in thinking and the desire for decentralized systems. Centralization is to rely on a central authority, such as administration, government, or a board. Conversely, decentralization does not have a central authority. The decentralized technologies, products, or creations are owned by the builders and users. It is the gathering of skills from a variety of sources and validating that knowledge chained in our wallets. The future of education and learning does not necessarily tie a student to one institution or district. Students can learn from anywhere and do anything. For those in the traditional educational system, decentralization may be difficult to embrace. Education is driven by centralized systems, which determines funding or the money available (Sanchez, 2020; Schroeder, 2019). However, open source is the future. Explore open source and conversations about decentralization versus centralization. Who is in control?

If power shifts to the users, then Web 3.0, the future, is community-driven. Decentralized Autonomous Organizations (DAO), which is the way groups and communities will be structured (and are being structured). In a DAO, the group has a common, specific mission that is managed by a shared set of rules encoded on a blockchain. A DAO has improved transparency in comparison to traditional companies. All records are available to view by anyone at any time. DAOs also reduce risks of censorship and corruption (Weston, 2021). A potential use case in education could be how we create community in our classrooms and classroom management procedures. Also, parent-teacher organizations (PTO) would be a use case for creating community and moving to decentralized systems to support schools in educating children.

Experience: Metaverse or Digital Twin

The metaverse or digital twin campus is the future. In the metaverse exists digital currency, marketplace (or digital commerce), online shopping, NFTs, the workplace, meetings can all take place, as well as infrastructure, social media, device independence, gaming, digital assets, digital humans, natural language processing, concerts, social, and entertainment events. Yes, of course, even the classroom. The metaverse is a personalized, dynamic, human-centric, problem-based, immersive, self-driven experience, and it offers the ability to capitalize on practical life skills (like financial literacy and entrepreneurism) that can be created in an immersive environment.

There are hybrid learning models. For example, Dallas Hybrid Preparatory School opened at the start of the 2021-2022 school year. It uses a skills and rewards approach on the digital platform. Three days a week are in a gamified learning universe and two days are on campus. They incentivize students by rewarding them for good attendance with tokens. Companies connect directly with students for virtual mentoring and internships (Faheld, 2023).

There also are more than ten colleges in the United States that have metaversities or a digital twin campus to promote remote student engagement and immersive learning experiences. Morehouse College in Georgia, the University of Kansas School of Nursing, New Mexico State University, South Dakota State University, Florida A&M University, West Virginia University, Southwestern Oregon Community College, California State University, Alabama A&M University, and University of Maryland Global Campus have launched their metaversities so students may now attend courses using this technology (Paykamian, 2022).

Barriers Within the Educational System

There are barriers within the educational system that must be acknowledged and addressed when considering technology tools and innovation.

- Administration: Most new policies and procedures must be approved by administration. Unfortunately, they may not necessarily be familiar with these tools on how they are used in education, literacy, or learning.
- Federal regulations: Public schools must abide by federal regulations and laws, such the Disabilities Act, FERPA, and the Idea Act. These must be considered when implementing new curriculum, instructional practices, or altering the learning environment.

- Security: Cybersecurity education and training would also be helpful in protecting our students. Use of technology can be done safely and securely; however, it can be a barrier until all potential threats are considered and mitigated. Interaction in the virtual world and with certain technologies will require parameters and boundaries.

- Cost: Technology cost. It costs to buy devices and software. Technology and technology innovation in schools has been and is a challenge. Cost is a barrier.

- Access: Cost makes access a barrier as well. In addition to barriers to obtaining up-to-date software and equipment, federal regulations to protect our students, like the use of firewalls prevent access to certain sites and programs in certain areas that are not harmful or inappropriate (Francis, 2023).

Considerations

How do we implement new technologies into our educational system? Can we provide an immersive experience? What are you preparing students for? How? No matter what level you teach or work with, we are preparing our students for the future—whether it is for the next grade, the next level—college or careers. We are preparing our students to be competitive. In addition to our curriculum, we must plan for how we help our students reskill, upskill, and retool.

According to Whiting (2020), "fifty percent of employees will need reskilling by 2025" (p. 4). That is less than two years away. Just imagine what that means for our students and more importantly for us. Many of our institutions will need to offer professional development and training for the digital transformation. Eighty-five million jobs may be replaced by a shift in the division of labor between humans and machines, and 97 million may emerge that are more adapted to the new division of labor between humans, machines, and algorithms (Whiting, 2020). How are we restructuring our curriculum? How will we ask students to apply knowledge and understanding of different tasks? How are schools preparing students in kindergarten to prepare for the future? How do you see technology and innovation impacting literacy, teaching, learning, and academic advising? How do emerging technology and technology innovation impact what you do daily? How can these ideas and concepts benefit students?

Tasks and concepts may look differently because some things will be done by a machine. What are the other tasks and activities that students can do and think critically about? It is a great time to build and acquire new skills. Talent gaps refer to the lack of skilled personnel in an organization. It is time to do a

talent gap analysis and skills gap analysis. There is a tool to identify current and projected training, hiring requirements within an organization, and align those with our instruction practices and curriculum changes. There is a process to help determine the gap between the present skills and competencies and the preferred skills and competencies (Lemoie & Soares, 2020; Whiting, 2020).

Recommendations

The Catalyst Approach to Immersion (Francis, 2023) is an approach for creating pathways into Web 3.0 and becoming more familiar with emerging technologies. Initially, based on comfort level, focus on these six elements when considering new technologies:

1. *Purpose*: Know your purpose. What is it you are doing? What is your goal? Look at all you do on campus and off campus. How do these actions relate? Figure out how technology and innovation fit into where you are and what you do, whether it is teaching elementary, middle school, high school, or higher education.

2. *Exposure*: With your purpose in mind, create opportunities for exposure—not only for you, but your students too.

3. *Education:* Educate yourself. Start taking webinars, courses, and other professional development. Many of the webinars and certificate programs that you can take to learn more about these different technologies are free. Read articles. Stay abreast of new trends in education and technology.

4. *Community*: Connect with a community. Encourage other educators to connect with communities. There are educational communities that are focused on Web 3.0 or blockchain technology and education.

5. *Experience*: Be open to experiences with different technologies. Get a wallet. Any of these courses will typically show you how to onboard and learn. Start thinking about what you can do with your students.

6. *Strategy*: Have a strategy for preparing for the digital transformation. Refer to the previous five elements. Do not try to implement it all at once. See what makes sense for where you are. Slow and steady. It does not have to be all at once. I encourage educators and teacher educators to start becoming familiar with these concepts and incorporate them into your courses. Teach students how to implement the technology safely and securely (Francis, 2023).

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HOW IS DYSLEXIA BEING CONCEPTUALIZED ACROSS STATE LINES? A CONTENT ANALYSIS OF STATE DYSLEXIA HANDBOOKS

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Abstract

State dyslexia handbooks outline how schools within a given state are required to approach dyslexia identification and instruction, and often include other information such as statewide adopted definitions of the term and educator requirements. The current study is a content analysis of 30 state dyslexia handbooks and resource guides. The study's purpose is to identify the following: (a) the most commonly used definitions among the states (including primary characteristics and secondary consequences), (b) how states are identifying and instructing students with dyslexia, and (c) the educator preparation requirements and recommendations within the examined states. Major findings of the study include the following: (a) the range of definitions, categories, and instructional resources vary widely among states; (b) teacher learning is not adequately addressed in the majority of handbooks; and (c) writing instruction is largely missing from the published handbooks.

Keywords: content analysis, dyslexia, educational policies, educator requirements, literacy instruction

Introduction

Dyslexia, a term commonly used to describe difficulty with reading words, has origins dating back to 1887 (IDA, 2021a). Yet, in recent years the topic has received an increased amount of attention. In fact, dyslexia was recognized as one of the "hottest" topics in 2020 (Cassidy et al., 2020) and 2021 (Cassidy et al., 2021). Furthermore, the topic has also been featured in special projects and publications of some of the largest literacy organizations—two being the Literacy Research Association's report titled, *An Examination of Dyslexia Research and Instruction, with Policy Implications* (Johnston & Scanlon, 2020) and the upcoming special dyslexia issue of *Reading Research Quarterly* that is scheduled to be published by the International Literacy Association in the year of 2022 (ILA, n.d). This increased attention even spreads beyond the literacy field and into other outlets such *National Public Radio* (NPR, 2016), *Newsweek* (Lowe, 2017), and the *Public Broadcasting Service* (PBS, 2020).

In years past, publications have largely focused on defining dyslexia, as well as identification of the condition and instruction for students determined to be dyslexic (e.g., American Optometric Association, 2004; Hudson et al., 2007; Shaywitz, 2003). However, more recent publications have shifted the discussion to focus on the absence of a universally adopted definition of dyslexia, as well as the associated consequences (Elliott, 2020; Johnston & Scanlon, 2020). Literacy experts have suggested that not having a well-defined definition of dyslexia has resulted in difficulty in the following: (a) determining prevalence percentages

(Elliott, 2020), (b) establishing identification processes (Brady, 2019; Snowling, 2019), (c) identifying effective instruction (Miciak & Fletcher, 2020), and (d) conducting research with fidelity (Johnston & Scanlon, 2020). Additionally, having dyslexia laws and guidelines being defined by individual states (Morin, n.d.) has fueled opportunities for further discrepancies across state lines.

Considering recent concerns over the varying definitions of dyslexia and the difficulties that have resulted, the current research team sensed the need to examine the status of dyslexia within each of the 50 states. The current study analyzes the state dyslexia handbooks and resource guides to identify the most commonly used definitions among the states (including primary characteristics and secondary consequences) as well as how states are identifying and instructing students with dyslexia. Also analyzed are the educator preparation requirements and recommendations that are outlined in the publications. The research team respects that states may have other resources such as websites and other publications but focused the current study on analyzing state dyslexia handbooks and resource guides because such resources outline how schools within each of the given states are required to approach dyslexia. Following the analysis, the research team used the results to make recommendations for further growth within the field.

Setting the Context

The word *dyslexia* is made up of *dys* meaning "not" or "difficult", and *lexia* meaning "words", "reading", or "language"—so the term *dyslexia* literally means "difficulty with words" (Hawaii Branch of the International Dyslexia Association, 2014). Much confusion about the myths and truths of dyslexia has plagued the topic for decades. One of the most common misunderstandings is that letter reversals are a sign of dyslexia (Hudson et al., 2007; Rayner et. al., 2001). Such ideas have widely been acknowledged as myths for at least the last 20 years (ILA, 2016; Rayner et. al., 2001), and it is now widely accepted that letter reversals are common in the early stages of learning to read and write, specifically up until the age of seven years old (Kelly, n.d.). Discussions clarifying myths and truths of dyslexia continue into recent times (Oklahoma State Department of Education, 2019; Texas Education Agency, 2018) and illustrate how the topic has been perceived differently across time and among various groups.

Dyslexia being perceived differently among audiences was a "hot" discussion of 2021 (Cassidy et al., 2021), particularly with the release of the Literacy Research Association's (LRA) special report titled, *An Examination of Dyslexia Research and Instruction, with Policy Implications* (Johnston & Scanlon, 2020). In the publication, authors Johnston and Scanlon share that "there is much

disagreement about how to define dyslexia; so much so, that some argue it is not a useful classification" (p. 3) and the lack of a common definition has caused confusion among educators and has even delayed advancements in research and instruction. In the 2021 *What's Hot in Literacy* publication, Cassidy and colleagues explained that not having one agreed upon definition for dyslexia has led to complications with the following: (a) identifying and employing effective instruction (Miciak & Fletcher, 2020), (b) establishing efficient identification processes (Brady, 2019), (c) establishing prevalence percentages (Elliott, 2020), and (d) conducting research with fidelity (e.g., participant selection, progress monitoring, comparison of research findings across studies defining dyslexia differently) (Johnston & Scanlon, 2020). These concerns point to the need to streamline discussions concerning dyslexia among and across various groups.

Reflecting upon the issues that have resulted from not having a universally adopted definition of dyslexia, it is noteworthy to mention that legislation for the topic is a responsibility of individual states. Such legislation includes, but is not limited to, a state-wide definition of dyslexia, identification processes, recommended or mandated assessment and instructional procedures, as well as teacher education requirements and required professional development. States are documenting such legislation in dyslexia handbooks and resource books to streamline implementation within school districts; however, doing so can also raise the question—how different are children's experiences across state lines? Surprisingly, Morin (2021) shares that not only does legislation concerning dyslexia vary among states, but some states do not have any legislation concerning the topic.

The current study analyzes the state dyslexia handbooks and resource guides to compare definitions (including primary characteristics and secondary consequences), identification procedures, suggested and required instruction, as well as educator requirements. For the purpose of this article, these publications are referred to as state handbooks. To prepare for the analysis, a review of the available literature was completed and organized into the following four subheadings: definitions, identification and instruction, educator requirements and training, and current context.

Literature Review
Definitions
The definition of dyslexia has evolved since Dr. Rudolph Berlin first coined the term in 1887. In fact, the International Dyslexia Association (IDA) reveals that "a precise definition eluded professionals for more than one hundred

years"—illustrating that the term "dyslexia" has been defined differently across time (IDA, 2021a, para. 2). Previously conceptualized as a condition of "reading backwards," the IDA (2021c) reports that this claim is false and far from their current understanding of the condition, which they define as the following:

> Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (IDA, 2021b, para. 1)

IDA's definition is largely accepted as being the key description of the term, as evidenced by its influence on state laws (see Alaska Legislative Task Force, 2019; Office of the CIO, n.d.) and its incorporation into a magnitude of resources (see California Department of Education, 2018; Illinois State Board of Education, 2019; Texas Education Agency, 2018). Such widespread adoption of IDA's definition is perhaps an outcome of its robust origins. Originally constructed in 1994, the first edition of IDA's definition was drafted by the *Definition Consensus Project* (IDA, 2021a)—a collaborative group of practitioners as well as respectable researchers (e.g., Reid Lyon, Sally Shawitz, and Louisa Moats) and led by not only IDA, but also the National Center for Learning Disabilities (NCLD) and the National Institute of Child Health and Human Development (NICHD). IDA's definition of dyslexia continued to evolve over the years as neurological research revealed more about reading difficulties, and according to the webpage of the *Definition Consensus Project* (IDA, 2021a), IDA's definition received its last update in 2002 and was adopted by the IDA Board of Directors on November 12, 2002.

   Although some states do include the IDA definition in their state handbooks, some states also include their own definition of dyslexia. For example, the State of Texas refers to the IDA definition, but also includes in its own definition regarding the topics of *sociocultural opportunities* and *related disorders* stating the following:

> "Dyslexia" means a disorder of constitutional origin manifested by a difficulty in learning to read, write, or spell, despite conventional

instruction, adequate intelligence, and sociocultural opportunity. "Related disorders" include disorders similar to or related to dyslexia, such as developmental auditory imperception, dysphasia, specific developmental dyslexia, developmental dysgraphia, and developmental spelling disability. (Texas Education Agency, 2018, p. 1)

Other trusted sources providing definitions of dyslexia include, but are not limited to, hospitals (see *Scottish Right for Children*), Institutes or Networks of Clinics (see Dyslexia Institutes of America), and school districts. Again, many of these entities cite the IDA definition of dyslexia, though the *Scottish Rite for Children* in Texas is one facility that does communicate its own description of the term. According to the website of *Scottish Rite for Children* (2021), dyslexia is a language-based learning disorder specifically causing trouble with connecting sounds to letter symbols and leading to difficulty in learning to read and spell. Also included in the *Scottish Rite for Children*'s description is that "it is due to differences in the brain" (para. 3) and "the root cause is weak phonological, not visual, processing" (para. 3). Although the description provided on the website of *Scottish Rite for Children* does not seem to link the condition to difficulties in reading comprehension, reduced reading experiences, and limited vocabulary and background knowledge—as the IDA's (2021b) definition mentions—the website does mention that reading subskills such as accuracy, speed, comprehension, and spelling should be evaluated as part of the diagnosis process.

Among the literature reviewed, there is wide-spread agreement that dyslexia includes difficulty with word reading and spelling. Other largely accepted descriptions include that dyslexia is neurological in origin, connected to a weakness in phonological awareness, and impacts other literacy skills in addition to word reading such as reading comprehension and vocabulary growth. The current study focuses further on how dyslexia is being defined within state handbooks.

Identification and Instruction

Recent publications draw attention to the different prevalence percentages for dyslexia. Johnston and Scanlon (2020) report that these percentages are ranging from as low as five percent of the total population (as reported by Butterworth & Kovas, 2013) to as high as twenty percent (as reported by IDA, 2021c). Elliott (2020) discusses these varying prevalence percentages, while attempting to pinpoint possible causes for the widespread variation—one possible cause being that "reading skills are distributed normally in the population with no clear boundary between normal and disabled reading performance" (p. S62). Furthermore,

Elliott proposes that more accurate prevalence percentages could be obtained if there were a "general agreement about boundaries with moderate and severe dyslexia determined by performance 1.0 and 1.5 standard deviations below the test mean, respectively" (p. 62). With publications drawing attention to varying prevalence percentages and there not being general agreement for the identification process, this section contributes further insights into how dyslexia is currently being identified and what instruction may look like once a student is identified with dyslexia characteristics.

Screening assessments and diagnostic evaluations may be used during the identification process, but they are not always and the way they are used may vary. Screening assessments may be given to all students in a particular grade level, as is the case in Oregon where all kindergarten students are screened for early indicators of reading difficulties (Beck & Pelt, 2018). Arkansas also screens entire grade levels but includes kindergarten and first and second grades in their state's screening process (Arkansas Department of Education, 2018). Some states mandate specific screenings as is the case with Oregon mandating the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) (Beck & Pelt, 2018), while other states such as Colorado (Colorado Department of Education, 2020) provide lists of possible assessments from which individual school districts can choose [e.g., Aimsweb Plus, Acadience Reading, FastBridge, i Ready, ISIP ER Istation, Phonological Awareness Literacy Screening (PALS) and STAR Early Learning]. Of course, the increase in screenings in recent years is partly credited for the increased number of students identified with dyslexia (Stoker et al., 2019).

Diagnostic evaluations identify a student's learning strengths and weaknesses and the underlying root cause of academic difficulties, and like screening assessments, they vary across state lines. Some states such as Colorado complete a diagnostic evaluation once a student demonstrates characteristics of dyslexia (Colorado Department of Education, 2020). Diagnostic evaluations in Colorado include three phases. In phase one, background information (e.g., family history, student's birth, and medical history) is collected through questionnaires and family interviews. In phase two, individually administered assessments collect data in the following 11 areas: expressive and receptive vocabulary, listening comprehension, phonological/phonemic awareness, rapid automatized naming, verbal memory skills, alphabetic principle and phonics skills, decoding and word recognition, oral reading fluency, reading comprehension, spelling, and written expression. Some comprehensive diagnostic evaluations also include math calculation skills, math fluency, mathematical problem-solving, processing speed, general information of the student's achievement in a variety of content areas, and a cognitive (intellectual) assessment (Colorado Department of Education, 2020).

Phase three includes scoring, interpreting, and reporting the assessment findings. While Colorado performs a comprehensive diagnostic evaluation, other states such as Nevada build progress monitoring into a Response to Intervention (RTI) or a Multi-Tiered Systems of Support (MTSS) framework (Nevada Department of Education, 2015). In Nevada, dyslexia instruction can be included in tier II and tier III instruction. In addition to identification being different across state lines, identification can be complicated further for students who have multiple learning differences (Stoker, et al., 2019) and for English Learners (ELs) who have unique challenges due to language learning (Linan-Thompson, 2010).

Effective literacy instruction has been said to include explicit, systematic, structured, and cumulative teaching of the five pillars of reading (NRP, 2000). As for students identified with dyslexia, publications also recommend cumulative language instruction using multisensory instruction (IDA, 2021C; Reinhart & Martinez, 1996; Wilkins et al., 1993). Additionally, critical elements of teaching students with dyslexia include phonological awareness (especially phonemic awareness), sound and symbol associations, morphology, syntax, and semantics (International Dyslexia Association, 2021d). Also suggested is diagnostic teaching which is designed to meet the individual needs of the student (IDA, 2021d).

Students with dyslexia may also receive instructional accommodations and modifications. Accommodations can be defined as "changes to the delivery of classroom instruction or the accompanying materials" (IRIS Center Peabody College Vanderbilt University, 2021, para. 3). "Changes to the format of a test or its administration procedures" (IRIS Center Peabody College Vanderbilt University, 2021, para. 4) can also be made to accommodate learners during testing. Modifications are "adaptations that change *what* (emphasis original) students learn and are used with students who require more support or adjustments than accommodations can provide" (IRIS Center Peabody College Vanderbilt University, 2021, para. 10). Students with dyslexia may have access to assistive technology, which is defined as

> any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability. The term does not include a medical device that is surgically implanted, or the replacement of such a device. (U.S. Department of Education, 2017).

The current study supplies insight into the identification and instructional practices included in state dyslexia handbooks.

Educator Requirements and Training

Educator requirements and training also vary across states. Some states provide professional learning opportunities to support teachers with acquiring the knowledge and instructional practices needed to assist students with dyslexia. For example, Oklahoma requires each school to provide professional learning on dyslexia awareness and that training must include the following: dyslexia indicators, effective classroom instruction, and dyslexia resources (Oklahoma State Department of Education, 2019). In New Mexico, each school's or district's literacy plan must include a plan for accredited professional development in the areas of structured literacy and the science of reading for all elementary and special education teachers, including administrators (New Mexico Handbook, 2020).

In addition to state requirements, there are organizations that provide comprehensive training programs. The *Scottish Rite for Children* (2021) offers a two-year Dyslexia Therapist Training Program for Texas certified teachers. The program offers training in dyslexia identification, characteristics, classroom instructional strategies, and conducting parent seminars. For this program they use their structured, multisensory curriculum, *Take Flight: A Comprehensive Intervention for Students with Dyslexia.* Another organization, the Neuhaus Education Center (2021) provides an IDA approved Specialist Preparation Program which prepares participants to work with students with dyslexia. The program is grounded in coursework and practice. Participants complete 60 hours of Basic Language Skills training and then they are admitted into the Level 1 preparation program which prepares them to be a Dyslexia Practitioner (Neuhaus Education Center, 2021). After completion of Level 1, participants can continue to advance to Level 2, which prepares them to become a Reading therapist or a Dyslexia Therapist (Neuhaus Education Center, 2021).

Not having a uniformed educator requirement has led to some concerns. IDA shares that many educators are underprepared to work with children who are identified with dyslexia. In fact, IDA (2018) states that,

> the majority of practitioners at all levels have not been prepared in sufficient depth to prevent reading problems, to recognize the early signs of risk, or to teach students with dyslexia and related learning disabilities successfully. Inquiries into teacher preparation in reading have revealed a pervasive absence of rich content and academic rigor in many courses that lead to the certification of teachers and specialists. (p. 4)

As a step toward a possible solution, IDA (2018) recommends that a common set of standards be utilized by all programs that train and prepare teachers and

specialists. As part of this recommendation, IDA has created their *Knowledge and Practice Standards for Teachers of Reading* (KPS) (see Figure 1). The current study offers further insights into how educator requirements and training vary.

Current Context

Currently, the federal guidance on identifying, screening for, and teaching students with dyslexia is broad. In the previous section, the convoluted state of defining dyslexia makes it particularly difficult for the federal government to strategically plan for and support states as they work to develop structures that support learners with dyslexia. Elliott (2005) identified and described three areas that are barriers to supporting learners with dyslexia. First, he states that the conceptualization of dyslexia is problematic due to the issue of discriminating between students with dyslexia versus students who struggle with learning to read but are not dyslexic. The second area that Elliott addresses is that of teaching. He states that there is "no clear evidence that there exists a particular teaching

FIGURE 1
IDA Knowledge and Practice Standards for Teachers of Reading

KPS	Summary of Concepts Included
Standard 1: Foundations of Literacy Acquisition	Oral language development; language processing requirements for reading and writing; reciprocal relationships among multiple foundations skills such as phonemic awareness, decoding, and spelling
Standard 2: Knowledge of Diverse Reading Profiles, Including Dyslexia	Federal and state laws, characteristics of dyslexia, variations of reading difficulties
Standard 3: Assessment	Principles of text construction (e.g., validity and reliability), purposes of different assessments (e.g., progress monitoring and diagnostic), ways of reading and interpreting common diagnostic assessments
Standard 4: Structured Literacy Instruction	Practices of structured literacy instruction, multisensory and multimodal language-learning techniques; adapting instruction to accommodate individual needs; applying research-based instruction for phonological awareness, phonics, fluency, vocabulary, comprehension, and written expression
Standard 5: Professional Dispositions and Practices	Communication of scientifically supported best practices, conflicts of interest, confidentiality, intellectual property

Note: See IDA (2018) for full descriptions of the KPS.

approach that is more suitable for a dyslexic subgroup than for other poor readers" (Elliott, 2005, p. 16). Instead, he contends that all students with reading difficulties would benefit from structured intervention programs (Elliott, 2005). Finally, Elliott discussed the idea of resourcing where he outlines the potential equity issues between those receiving a diagnosis of dyslexia and those in the category of struggling reader. He pushes the field to consider using more resources for all learners who struggle, rather than seeking a specific diagnosis for a few. Conceptualizations (such as these presented by Elliott) and the varied stakeholders' definitions of dyslexia leaves the federal government in a precarious position of how best to push the state networks to provide support, while not providing explicit guidelines on how to do so. Below is a brief overview of how the federal government approaches dyslexic learners through federal legislation and memorandums.

Federal direction around dyslexia is vague. Dyslexia could most reasonably be addressed in the *Individuals with Disabilities Education Act* (IDEA) (U.S. Department of Education of Special Education and Rehabilitative Services, 2019). Specifically, IDEA mentions reading skill and comprehension in eligibility determination for Individualized Education Plans (IEP). It is important to note that dyslexia is not specifically mentioned in this document. However, the clarity in diagnosis for a specific learning disability must consider the difference between achievement and intellectual ability in oral expression, listening comprehension, basic expression, basic reading skill, and reading comprehension, which are related to dyslexia (U.S. Department of Education, 2019). Although IDEA does not specifically name dyslexia; schools are using "specific learning disability" under IDEA to qualify students with dyslexia for special education services.

In addition to IDEA, the 2015 U.S. Department of Education Office of Special Education and Rehabilitative Services (OSERS) generated the *Dear Colleague Dyslexia Guidance* letter (2015), which addresses the use of terms and clarifies that there is nothing in the IDEA to prohibit the use of the terms *dyslexia, dyscalculia*, and *dysgraphia* in IDEA evaluation, eligibility determinations, or IEP documents. Further, the *Dear Colleague* letter offers federal guidance on reading intervention, which indicates that children who do not minimally respond to interventions must be referred for an evaluation to determine if they are eligible for special education and related services. The OSERS's role is to provide state and local educational agencies a comprehensive guide to commonly used accommodations in the classroom for students with specific learning disabilities including dyslexia, dyscalculia, and dysgraphia. It also provides guidance for teachers and personnel implementing IEPs. For example, it is the teacher's

responsibility to understand the condition causing the child's disability (as a student with dyslexia or a reader who struggles). Finally, the *Memorandum to State Directors of Education from the Director of the Office of Special Education Programs* (U.S. Department of Education of Special Education and Rehabilitative Services, 2011) addresses parental rights to evaluation for dyslexia. This memo clarified that the Response to Intervention (RTI) process cannot be used to delay or deny an evaluation; parents can request a full evaluation at any time.

With the reviewed literature highlighting how dyslexia is conceptualized differently among various groups (including states), the current research team felt it was important to analyze the state dyslexia handbooks and resource guides to identify how dyslexia is conceptualized in each of the 50 states. What follows is a description of the methodology used, the findings of the analysis, and recommendations for further growth within the field of dyslexia.

Methodology

Data Collection

The study began with three attempts to collect the state handbooks for all 50 states. First, a member of the research team attempted to collect posted state handbooks by visiting the State Educational Departments' websites for all 50 states. This first attempt resulted in the collection of handbooks for 27 states. Secondly, members of the research team used the Google Search Engine to search the Internet for the handbooks of the remaining 23 states. The key terms used were the states' names as well as, "dyslexia handbook" and "dyslexia resource guide." This second attempt resulted in the retrieval of two to three handbooks, yielding a total of 30. Finally, a member of the research team emailed the State Education Departments of the remaining 20 states for which no handbooks or resource guides had been collected. The purpose of the email was to ask whether a dyslexia handbook or resource guide existed for the state. This third attempt did not secure any additional state handbooks; however, two states did reply and confirm that they were in the process of producing handbooks, and they simply did not have them available at the time of this study.

An EXCEL spreadsheet was created to collect, organize, and analyze the data. In the far-left column, the names of all 50 states were listed. When available, the links to the collected state handbooks were placed beside the given state. The remaining columns listed topics related to dyslexia; these topics were identified through a three-step process. First, two researchers independently read two state handbooks each—totaling four handbooks. While reading, the two researchers noted key terms, topics, and discussions within the given handbooks. Next, the

two researchers met to group the key terms, topics, and discussions into common categories. The larger categories were listed in the first row of the EXCEL spreadsheet (e.g., state definition, primary characteristics, and secondary characteristics), while items falling under those larger categories were listed underneath in the second row (e.g., poor decoding, poor spelling/encoding, and difficulties with reading comprehension); this helped with organization. The items listed in the second row became the key terms and ideas that the research team looked for in each of the collected state dyslexia handbooks.

Interrater Reliability and the Spreadsheet

A copy of the drafted spreadsheet was given to five members of the research team. Independently, each member read the dyslexia handbook for one state. While reading, members looked for the items listed on the EXCEL spreadsheet. When one of the items was found within the handbook, a "1" was placed in the associated EXCEL cell. If an item was not found within the handbook, a "0" was recorded for that item.

Following the researchers' independent readings, the five members met to discuss their scores and to discuss any variations in scoring. From this process the five members initially reached 63% agreement. They discussed the variations in scores and the following actions were completed: (a) two items were collapsed into one, (b) two items were explained through further clarification, (c) twenty items were found by revisiting the featured handbook, and (d) one item was removed—resulting in 100% agreement among the researchers. The outcome was an EXCEL spreadsheet listing 74 items which was to be used when documenting the content of the 30 collected state dyslexia handbooks. In addition to the described revisions, another revision made was adding the collection of qualitative data. For this, a tab for each of the 14 categories was created in the EXCEL file and was used to document direct quotes, as well as summaries of information concerning the listed categories. Similar to the quantitative data, the qualitative data was arranged by state. At the end of this process, the five members agreed that the EXCEL spreadsheet was ready to be used for the analysis of the remaining state handbooks. It was also at this time that two more researchers joined the research team, making a team of seven. The two additional researchers attended a training that explained the data collection procedure, while also giving them practice in documenting data. Later an eighth member joined the research team, but that individual did not analyze the collected handbooks.

Collection of Data and Data Audit

The collected handbooks were divided equally among seven members of the research team. All members read their assigned documents searching for

the 74 items listed in the EXCEL spreadsheet. Researchers recorded a "1" for the items that were present and a "0" for items not present. Over time, this method of scoring resulted in identifying how many state handbooks addressed the listed items. Additional qualitative notes were recorded in the tabs of the EXCEL spreadsheet and were used to further explain "how" states address the 74 items. Data collection was completed by the end of November 2021.

Once all data was recorded in the EXCEL spreadsheet, a data audit was utilized as a validation measure for the quantitative data. One researcher served as the auditor. The process began by randomly selecting 10 percent (n=3) of the documents. Although there is not a concrete agreement on the amount of data to be audited, a range between 10-25% is acceptable depending on the size of the dataset (O'Connor & Joffe, 2020). While reading the three randomly selected handbooks, the auditor repeated the analysis process described earlier, but used a separate copy of the EXCEL spreadsheet so that previous scores were unknown. The quantitative data from the audit was then compared to the original quantitative data recorded in the EXCEL spreadsheet. The data audit resulted in an 81% agreement which indicates an acceptable level according to Miles and Huberman (1994).

Data Analysis

Once interrater reliability was measured and confirmed to be at an acceptable level, the collected data was analyzed to identify the items most commonly mentioned across the collected handbooks. Data analysis began by finding the sum for each item listed in the EXCEL spreadsheet. Sums were then divided by the total number of handbooks collected (n=30); allowing the research team to view the results as percentages. The outcome of this process was not only a list of items most commonly found in state dyslexia handbooks, but also the percentage of handbooks for which each of the 74 items appeared. It is important to note that even though a state may not address an item in their handbook, it does not mean that they are not addressing the item elsewhere. Instead, it simply means that the research team did not find evidence of the item within the collected handbooks. The quantitative data is provided in the findings section. The collected qualitative data is used to further illustrate our findings.

Findings

The information that follows (including the totals and percentages) is based on the analysis of dyslexia handbooks for 30 states; the percentages are not representative of all 50 states. The collected dyslexia handbooks were found on state education department websites. In lieu of a handbook, 18 states have posted dyslexia

information on their state education websites in the form of a PowerPoint slide-show, task force on dyslexia report, a one-page website, or as part of the state's special education program handbook, but those were not examined for the current study. Page lengths for the handbooks range from 31 to183 pages. Seven of the handbooks were over five years old, one was 10 years old, and one did not include a publication date.

Definitions

Each state included a definition of dyslexia toward the beginning in their handbooks. Twenty-six of the 30 states (87%) used either the exact wording or a very close version of the International Dyslexia Association's definition. Some elements of the IDA definition were more common among the definitions used in the collected state handbooks. The elements mentioned most were reading disability/poor decoders/nonfluent word reading (93%), poor spelling (93%), phonologically-based issues (93%), specific learning disorder (90%), neurobiological in origin (83%), and unexpected in relation to other cognitive abilities (83%). Fifteen of the reviewed states indicated that children who exhibit signs of dyslexia may have persistent intractability to high-quality intervention. Most of the handbooks in this study listed primary characteristics of dyslexia including the following: phonological awareness difficulties (97%), poor decoding (97%), fluent word recognition/sight words (93%), and poor spelling and encoding (87%). Secondary characteristics of dyslexia were also included and were found within the examined handbooks at the following percentages: difficulties with vocabulary (87%) and reading comprehension (83%), reduced reading experiences (83%), lack of background knowledge (77%), and writing difficulties (63%). Taken altogether, these data show that most states with handbooks rely on the IDA definition or something very much aligned to it.

Identification and Instruction

Findings indicate that there are variations in how states are identifying dyslexia. Twenty-five of the thirty handbooks reviewed indicated the use of a screening assessment. Twenty-two of these specifically list the areas for which they screen, including phonological awareness (88%), decoding (80%), rapid naming of letters (80%), alphabetic principle (72%), comprehension (64%), encoding (52%), accuracy (48%), and vocabulary (44%). Therefore, the areas of focus that states deem to be important are directly aligned to the primary characteristics included in the IDA's definition of dyslexia.

Twenty-one (70%) of the examined handbooks discuss the use of a diagnostic/formal assessment to obtain specific information related to the strengths

and growth areas of students who demonstrated signs of dyslexia on the screening instrument. Of these, the most assessed areas were word reading (70%), phonological awareness (70%), spelling (67%), phonics knowledge (47%), fluency (60%), vocabulary (57%), comprehension (53%), and writing (47%). Two of the 30 states did not mention the use of a screener or a diagnostic tool. Many handbooks recommend early identification of students with reading difficulties, most requiring screening beginning in kindergarten (70%). Two states begin screening at age 3, one state begins in first grade, and 20% of states do not include this information. Fifty-seven percent of states provide a list of approved assessments, such as DIBELS and Star Renaissance, from which districts and schools may choose. Only one state mandates specific assessments to be used, while 40% of states do not provide lists of assessments. These data suggest that not all states have specific screening and assessment procedures in place for the identification and further diagnosis of students who may have dyslexia.

Instructional Components

All 30 state handbooks included a section on how to address the instruction of students identified with dyslexia, although the specific components mentioned vary. The most frequent areas for instruction were comprehension (97%), fluency (90%), phonological and phonemic awareness (90%), phonics/sound-symbol awareness (90%), morphology (83%), syntax (73%), syllabication (70%), oral language (70%), and orthography (67%). Areas of instruction mentioned by fewer states were writing process (50%), handwriting (47%), and rapid naming of letters (27%). Regarding the types of instruction that states recommended for students exhibiting signs of dyslexia were the following: the use of explicit, systematic, and cumulative strategies taught with fidelity (97%); the use of multisensory techniques (70%); diagnostic teaching to automaticity (67%); and structured literacy instruction (60%). Additionally, 27% of the examined state handbooks mentioned the science of reading and 37% mentioned Scarborough's Reading Rope (Scarborough, 2001). An interesting finding among this data was that, perhaps due to the variance of the definition of dyslexia as well as the components included in assessment procedures, the instruction to address student needs may not always be conceptualized similarly within states either.

The data found misalignments among definitions, identification procedures, and required instruction. Table 1 illustrates this finding by listing the number of handbooks that included phonological awareness, decoding, and spelling in their description of common characteristics of dyslexia, within their screening and formal assessments procedures, and in their required instruction. As demonstrated in Table 1, states may identify a common characteristic of

TABLE 1
Number of Handbooks Addressing Literacy Skills Across Multiple Categories

Literacy Skills	State Handbook Category			
	Characteristic of Dyslexia	Screening	Formal Assessment	Instruction
Phonological Awareness	29	22	21	27
Decoding	28	20	14*	27
Spelling	28	13	20	20

*14 states complete a phonics survey, yet 21 states formally assess word reading

dyslexia, such as phonological awareness, but they may not address that same skill in their identification procedures or in required instruction.

Other findings include that half of the states provided specific resources, such as lesson plan templates, sample lessons, and even word lists. Most of the recommendations in the handbooks surrounding instruction are generic, leaving discretion to the district and school.

Accommodations and Modifications

Accommodations and/or modifications for students identified as exhibiting characteristics of dyslexia are mentioned in twenty-seven (90%) of the examined handbooks. Twenty-four of the handbooks (89%) included information on instruction (i.e., instructional strategies), twenty-three (85%) include information on materials that may aid in instruction, and twenty-one (78%) include information on student performance (i.e., evaluating how the child responds to instruction). Some examples of instructional accommodations listed in handbooks were the following: providing extended time for assignments; preferential seating; paraphrasing assignments; providing increased response time; using a tape recorder; allowing the student to respond orally; using picture schedules; using graphic organizers; pre-teaching material; reviewing content often; using small group teaching; and providing visuals of letters and numbers through the use of letter and number strips. Examples of testing accommodations listed in handbooks were the following: having un-timed or extended time for test-taking; providing a quiet and isolated location to take tests; and providing study guides for tests.

Examples of modifications provided in the handbooks, although some were incorrectly labeled as accommodations, were: writing a smaller number of

sentences; reducing the number of items on an assignment or assessment; providing an alternative assignment or assessment; and adjusting spelling lists. The information provided is relevant to the descriptors of dyslexia that the state handbooks provide. Educators searching for possible accommodations and modifications would most likely find these resources helpful.

Along with accommodations and modifications, twenty-three (77%) of the collected state handbooks mentioned the use of assistive technology when working with students who possess characteristics of dyslexia. Examples of low-tech assistive technology included in the handbooks are pencil grips, slant boards, reading rulers, and highlighting tape. Examples of high-tech assistive technology included in the handbooks are text-to-speech readers, technology-based graphic organizers, smart pens, tablets, audiobooks, spell-checkers, and word prediction applications. Several state handbooks noted that it is important for teachers to receive training in the use of assistive technologies that students might commonly need. It is possible that the handbooks serve as helpful resources for educators who are searching for potential accommodations and modifications for their students with dyslexia.

Educator Requirements and Training

Overall, the states who have dyslexia handbooks do not provide much guidance in educator preparation for working with children who exhibit signs of dyslexia. Seven of the 30 state handbooks mention that their state offers dyslexia certification training for teachers, and six offer a Dyslexia Therapist/Interventionist endorsement. Only six handbooks included information related to the professional learning of students enrolled in university educator preparation programs. The information provided in these handbooks regarding educator training in the area of dyslexia is quite sparse with states providing general information and most not mandating training at pre-service or in-service levels. One state requires one reading specialist to be employed in each district and to have training in the following areas: identification, intervention, and accommodations for students with dyslexia. Two states list the skills that teachers should possess and provide resources for districts for materials and training, such as a dyslexia certification training course accredited by the International Multisensory Structured Language Education Council and the IDA. Finally, one state provides a state education code which mandates that teacher preparation programs must include information on dyslexia and that practicing teachers must receive continuing education on teaching students with dyslexia. The fact that only a few states include information and resources related to pre-service teacher preparation and in-service teacher development is noteworthy, as it is an important aspect of

dyslexia identification and instruction into which districts and schools might seek guidance.

Discussion

Thirty state dyslexia handbooks were examined in the current study to identify the most used definitions of dyslexia, processes used for identifying and instructing students, and the states' requirements for educator preparation and teacher development. This section further explores the three major findings of the study.

One finding of the study was that the range of definitions, categories, and instructional resources varies widely among states. Previously, Elliott (2005) related the wide-spread variations within the field of dyslexia to the following: (a) the issue of discriminating between students with dyslexia versus students who struggle with learning to read but are not dyslexic, (b) the idea that there is no clear evidence that a particular teaching approach is more suitable for a dyslexic subgroup than for other poor readers, and (c) the potential equity issues between those receiving a diagnosis of dyslexia and those in the category of struggling reader. We second these concerns and add that the inconsistency of definitions, categories, and resources is problematic for many students, but perhaps the most problematic for students who are transient. Like Elliot (2005), who pushed using more resources for all learners who struggle rather than seeking a specific diagnosis for a few, we recommend that more emphasis be placed on resources for the variety of struggling readers that exist. As Riddle Buly and Valencia (2002) suggest in their struggling readers' profiles research, there are a variety of ways that a reader may struggle with reading. Teachers who understand these intricacies are more able to address the individual needs of their students through differentiated instructional resources and instruction.

A lens through which to view this recommendation is Duke and Cartwright's (2021) new model, the *Active View of Reading*. This model expands on Gough and Tunmer's (1986) *Simple View of Reading* by "explicitly list[ing] contributors to reading—and, thus, potential causes of reading difficulty—within, across, and beyond the broad categories of word recognition and language comprehension" (Duke & Cartwright, 2021, p. 32). This model is recommended because educators must acknowledge that cultural context, vocabulary, reading fluency, morphological awareness, and motivation and engagement are associated with the two broad areas presented in the *Simple view of Reading*: word recognition and language comprehension. Duke and Cartwright's *Active View of Reading* model has implications directly related to the nature of assessment and intervention that should be in place for students who experience reading difficulties.

Secondly, the study found that teacher learning is not adequately addressed in the majority of the handbooks. In fact, in relation to all the collected data the least amount of information was found for teacher education and development. This is problematic for the field. This finding provides additional evidence to fuel IDA's (2018) concern that "the majority of practitioners at all levels have not been prepared in sufficient depth to prevent reading problems, to recognize the early signs of risk, or to teach students with dyslexia and related learning disabilities successfully" (p. 4). With decades of research establishing that the classroom teacher is the single most important educational determinant (Darling-Hammond, 2000; Sanders & Rivers, 1996), it is essential that more guidance be provided to early teachers and continued throughout their career. Although some steps have been taken to better prepare teachers such as the development of IDA's (2018) *Knowledge and Practice Standards for Teachers of Reading*, and certification programs such as those offered by the *Scottish Rite for Children* (2021) and Neuhaus Education Center (2021), our research team recommends that more resources be provided in the area of preparing teachers to instruct the variety of struggling readers that exist. Again here, teacher education programs that provide information through the struggling readers profiles lens (Riddle Buly & Valencia, 2002) situate pre-service and in-service teachers' knowledge within these profiles so that they are better able to address the individual needs of the students within each profile. States should have at the least a minimum requirement for educators and that requirement should address all reading difficulties. Such policies and requirements should be used to guide teacher education, initial certification, and advanced degree programs, as well as other organizations providing teacher education.

The third and final finding of the study was that writing is largely missing from the published handbooks. This is simultaneously startling, yet not surprising. Other researchers have also reported the absence or scarcity of writing instruction within the context of literacy instruction discussions. After analyzing questionnaires completed by 294 first- through third-grade teachers, Cutler and Graham (2008) determined the median time students in those grades spent on continuous writing was 21 minutes per day. However, the majority of that time was devoted to "traditional skill instruction" and "basic writing skills". A later study by Puranik et al. (2014) included classroom observations of 21 kindergarten teachers. Of the 90-minute language arts block, writing instruction occurred for only six to 10 minutes, with most of that time spent on handwriting instruction. Lessons consisting of modeled writing and the writing process were scarce, occurring at an average of less than one minute.

The finding that writing instruction is still largely separated from literacy instruction discussions is startling because of what is known about

the reading-writing connection. On the website of The National Council of Teachers of English (NCTE), Fink (2017) discusses this relationship and shares that "research has shown that when students receive writing instruction, their reading fluency and comprehension improve" (para. 2). Furthermore NCTE's (2011) policy brief titled, *Reading and Writing Across the Curriculum* explores the relationship among reading, writing, and learning in the content areas and states that,

> The research is clear: discipline-based instruction in reading and writing enhances student achievement in all subjects. Studies show that reading and writing across the curriculum are essential to learning. Without strategies for reading course material and opportunities to write thoughtfully about it, students have difficulty mastering concepts. (p. 16)

Considering the contributing nature that writing has to reading and content area success, we recommend that states be intentional about including writing instruction in discussions of improving reading skills. This would also mean that teacher education programs must provide more instruction around writing content and pedagogy for both pre-service and in-service teachers.

Lastly, our research also led to a recommendation for future research. Although the purpose of the current study was to examine state dyslexia handbooks, the research team acknowledges that states may publish dyslexia information outside of these handbooks. Therefore, a recommendation for future research is to expand the current analysis to include additional resources that may hold information about state dyslexia policies. Doing so has the potential to deepen what is known about how dyslexia is being conceptualized across state lines.

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STURTEVANT AWARD WINNER

HAPPY TO BE NAPPY: A COUNTERSTORY OF A BLACK WOMAN, LITERACY PROFESSIONAL Mapping "NAPPY" AS A POLITICAL AND SOCIAL DISCOURSE FOR YOUNG, BLACK GIRLS IN SCHOOLS

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Abstract

In this writing, I revisit bell hooks' (1999) Happy to be Nappy and offer counterstories to the negative representations of Black girl hair in schools. In my counterstories, I explore my own journey of going natural – ceasing to use chemical relaxers in my hair. Going natural has required me to (re)member childhood knowledges and consequences around being nappy. For me and many, young, Black girls – and women – these lived experiences are often painful and harmful. In the analysis, the themes of anti-Blackness, politicizations of hair, and love speak to the continued need to develop deeper and more nuanced understandings around the role of Black hair in school success.

Keywords: Diversifying Children's Literature; Natural hair; Black Feminism

Introduction

In 1999, bell hooks authored "Happy to be Nappy," a children's book featuring young, Black girls who twirl through the pages celebrating their Black, natural hair in all of its glory – short, long, and in varying textures and shapes. Girls wear bantu knots, twists, and afros. Their hair described as *soft*, *coiled*, and *sweet* seems almost to dance. Chris Raschka illustrates Black hair as alive and full of wonder. The girls stand shyly with their hair on display, skin in all shades of brown. Their eyes light up with pleasure, or look slyly to the side. Mothers tend to their daughters' hair with loving care. Every page is a joyous celebration of Black girls and their hair. The message is clear – Black girls and their natural, coiled hair are beautiful. The text of the book describes Black hair in positive, reaffirming terms challenging the racialized, pejorative, narrative of Black hair. Far from existing in a neutral space, Black hair refutes socially-constructed norms of beauty (Brady & Abawi, 2019; Byrd & Tharps, 2014). Yet, here are the images, representations, and messages that I had not seen in the countless books I read as a young, Black girl.

Here, for one of the first times, I saw Black girls' *natural* hair in its varied and beautiful states in a picture book. Natural is a term indicating hair that goes without the application of chemicals or texturizers designed to straighten the curl pattern. Culturally, the term *going natural* is used because many young, Black women begin their adolescence (and sometimes girlhood) applying these treatments. When, and for whatever reason, they choose to interrupt this process, they *go natural*. As with many women and in my own journey, this process has been one of decolonization, resistance, and liberation. In this writing, I explore my own counterstory of going natural within Black Feminist epistemologies to contest the anti-Blackness and political contexts of Black hair, its representations, and to engage hooks' (1994) love as a literacy practice in K-12 classrooms.

Theoretical Framework

In this chapter, I utilize Critical Race Theory (CRT)'s counterstories (Solorzano & Yosso, 2001) and Black Feminist epistemologies (Collins, 2009) as qualitative research methods. CRT embraces counterstories to legitimate the voices of scholars of Color and resist oppressive regimes of marginalization and silencing. By doing so, I center my voice and narrate my lived experiences as an African-American woman. Counterstories are steeped in political, social, and cultural ways of knowing and being.

CRT in education (Ladson-Billings & Tate, 1995) connects race with social and educational inequalities. With this theorizing, new assumptions emerged

about voice and legitimation. At its core, CRT sets forth the proposition that historical, social, cultural and linguistic, and legal doctrines are founded upon and intersect with race and racism (Tate, 1994; 1997). It questions normalized epistemological stances in which only particular pieces of knowledge about race and racism are accepted as legitimate. Central to these arguments is the supposition that all epistemologies and ontologies are grounded within the cultural, social and historical soil from which they grow. Ladson–Billings (2000) informs us that an epistemology is not just a *way* of knowing, it is a system of knowing. In education, this situating of race shifts it from individuals' beliefs to a social system through which individual and collective beliefs and behaviors occur.

Connecting the work of hooks (2000; 2014) and black feminist epistemologies (Collins, 2009) to CRT is an intentional act of resistance. hooks challenges us to examine ideologies and practices around race, gender, pedagogy, and literacy education. When studying the experiences of Black women and Black hair, these connections are complex, contentious, and necessary, but painful. She writes,

> The time to speak a counter-hegemonic race talk that is filled with the passion of remembrance and resistance is now. All our words are needed. To move past the pain, to feel the power of change, transformation, and revolution, we have to speak now- acknowledge our pain now, claim each other and our voices now. (hooks, 1995, p. 6).

In my own narratives, I acknowledge my pain, claim my voice, and most of all, create space for Black women and girls to claim each other and hold space for the opening of new literacy understandings around hair bias (Price-Dennis & Muhammad, 2021). Aligning aspects of hooks' work with literacy education and political discourses empowers Black girls to learn to find their own path to freedom.

Literature Review

Then I couldn't get a job
Cause corporate wouldn't
hire no dreadlocks
Good hair means curls and waves (no)
Bad hair means you look like a slave (no)
It's time for us to redefine who we be.
—India Arie, I Am Not My Hair

"Happy to Be Nappy," (hooks, 1999) written as a text for children, inter-sects the political, social, and cultural politics of anti-Blackness with Black girls' natural hair. Seeing this term in a non-Black context dug up white supremacist regimes around hair that I had experienced both from the external world and alongside internalized colorisms (Kerr, 2005) within my own Black community. hooks' use of the term *nappy* connotes a resistance to Eurocentric perceptions of beauty (Banks, 2000). Nappy is often understood as a racially derogatory term used to pathologize and inflict shame and harm on young, Black girls whose natural hair coils, contours, and shrinks but does not fall straight and smooth. hooks (1996) describes the social valuation of hair we see in media contexts, "the distinctly black-looking female is made to appear in a constant struggle to transform herself to look like a white female is a space only a brown-skinned black woman can occupy" (p. 128). Despite my intellectual knowledge, my own feelings of shame in engaging with *Happy to be Nappy*, however, were unexpected.

My memories of my hair being "nappy" were of wrestling with the social conceptions to which I aspired but failed to achieve. *Hair damage* occurs as Black girls find themselves "navigating the use of excessive hair products or harmful hairstyling techniques to change hair aesthetics" (Mbilishaka & Apugo, 2020, p. 645). For young girls, this means unlearning their natural beauty in favor of dam-aging hair care products. Additionally, it refers to the practices whereby Black girls attempt to conform to social norms (Banks, 2000) and replicate hair care practices of White girls whose hair care needs differ greatly. This attempt to con-form to and replicate Eurocentric concepts of beauty is one of violence (Oyedemi, 2016). Violence occurs around the hair, but also in feelings of well-being. Gathers and Mahan (2014) discuss the disconnected relationship between Black women's hair loss and medical treatment. The costs are also psychological influencing interpersonal relationships and pervasive feelings of sadness (Mbilishaka, et al, 2020). The consequences of having natural hair are tremendous.

Within schools, these violences have dire consequences. *Hair bias* refers to the negative treatment of Black girls based on the tightly-coiled texture of their natural hair. When wearing their hair naturally, Black girls are marked as unkempt, untidy, and unfit for school. The news features stories of Black girls forced to leave school because of their natural hair (Jacobs & Levin, 2018). These discriminatory practices exist in school settings both implicitly and explicitly and pathologize Black girls (McGill Johnson et al. 2017).

To understand how young Black girls experience hair bias, Mbilishaka and Apugo (2020) studied the narratives of 56 Black women. In their analysis, they found two major themes affecting Black girls in schools: hair shaming and

hair damage. They describe *hair shaming* as: defined by the practice of making objectifying verbal comments (sometimes/accompanied by physical assaults and denial of resources) about a person's hair aesthetics that positions her to emotionally negotiate and potentially internalize racist and sexist beliefs of inferiority. Hair shaming included racially derogatory terms like 'nappy' when describing hair texture or being called 'a boy' to reduce concepts of femininity and beauty to and critique hair length. (p. 641). They describe how Black girls are shamed by both peers and teachers alike.

In their study of Black parent narratives, Essien and Wood (2020) describe 'second-class hair' and 'presumption of defilement.' In the previous theme, Black hair's physical and cultural characteristics are deemed 'less than' in comparison to their White peers. In some school settings Natural hairstyles are considered to be signs of racial inferiority. Worse still, educators presume parents to be negligent about their children's hair when they style their children's natural hair. In one case, when a mother found barrettes and rubber bands in her child's hair that she had not placed there, "the director was immediately defensive and told me that if I would care more about my daughter's hair, her teachers wouldn't need to do it for me. Livid doesn't even begin to describe my feelings in that meeting" (p. 407). The child had worn an Afro to school. Presumptions of defilement are microaggressions rendering Black people as generally debased, physically dirty, infected, or diseased because of their hair. Through both of these themes, it is clear that the wearing of natural hair by Black girls created a racialized system of identification in which schools pathologize Black girls and their parents. Further, based on the Black girl narratives in their study, Rogers, Versey, & Cielto (2022) discuss how Black girls' identity and self-development are inextricable from their beliefs about their hair.

Henderson and Bourgeois (2021) demonstrate how young, Black children suffer discriminatory suspension and expulsion practices in schools because of their natural hair. These practices criminalize youth disproportionately contributing to poor academic performance, dropout, and entry into the prison system. Much of this negative, subjective treatment occurs in classrooms with teachers. The authors of the report advise that we continue to investigate our understandings around the school-to-prison pipeline (Wald & Losen, 2003).

The research on the negative treatment of Black girls because of their hair is growing. The volume of the research does not compare to the lived experiences of many Black women and girls who suffer daily wear and tear on their psyche and well-being by virtue of what is most natural to them – their hair. In this writing, I tell my own counterstories, but I also seek to analyze how these stories might inform the context of classroom literacies.

Methodology

Counterstories (Solorzano & Yosso, 2001) are sites of resistance. Utilizing a storytelling format, I talk in the first person and recount my lived experiences. As with hooks' (1999) *Happy to be Nappy*, the counterstories with which I engage are told in opposition to the normed, taken for granted ideals around which we read children's literature and in our classrooms lives.

In this writing, I present my brief counternarratives around my experiences with growing up and growing into my Black hair. Using *Happy to be Nappy* as a lens, I described and analyzed these narratives alongside my writing. The analysis was not a linear process. I gave myself permission to re-enter the stories after their initial writing. By doing so, the process of writing matched my own process with going natural with my hair. I had to test out a few ideas, step back, research more, and try again. My final results are not really final. They speak to where I am at this moment of my journey.

Anti-Blackness and Going Natural

the way it was
mornings
i got up early
greased my legs
straightened my hair and
walked quietly out
not touching

in the same place
the tree the lot
the poolroom deacon moore
everything was stayed
nothing changed
(nothing remained the same)
I walked out quietly
mornings
in the '40s
a nice girl
not touching
trying to be white
—Lucille Clifton, Good Woman: Poems and a Memoir 1969 – 1980

My personal journey towards natural hair beauty began late in my life as the Covid-19 lockdown began in March 2020. The shuttering of the salons forced me, for the first time since the age of 15, to go on a 'dedicated path' of going natural. I began a journey of re-discovering my crown, my glory – in all new ways.

I am not alone. Via YouTube and other social media platforms, I read commentaries of Black women learning about their natural hair – how to nourish it, braid it, style it and love it (Neil & Mbilishaka, 2019). As a woman, this has been a revelation. Also by this time, the Black Hair Movement was already in full swing. I turned to YouTube for instructions, advice, and support. Norwood (2018) describes the communities that sustained her in her journey:

> I was lucky to be taking this natural hair journey in the latter part of 2012, when natural hair bloggers, YouTube tutorials and even natural hair meet-ups were springing up all over the internet. These communities, virtual and real, offer Black women a safe zone, a place where they can ask questions, show their vulnerabilities and ambivalence, and express their fear and joy about going natural. (p. 79).

The natural hair movement is one of empowerment, joy, and love.

When I was growing up, a girl with nappy hair meant that she did not have "good hair" (Robinson, 2011). Good hair was curly or straight and soft, not as in the cottony soft that hooks celebrates. Soft and is in – smooth. Nappy was "bad," and, even worse, it made you "ugly."

I grew up with hair that met the standards of nappy. My natural hair is kinky, dense, and tightly coiled. Without proper care, it can become dry and brittle. The hair around the crown of my head springs up, begging to be set free from whatever products I use to bind it. As a young girl, I suffered the sting and stab of nappy as a racial slur slung at me by other children. I also had "peas in the kitchen." Peas are the tight, tiny coiled hairs that crown the head. My peas were at the nape of my neck, and no matter how my mother or sister brushed my hair – there they were. The bluish-green Ultra Sheen hair grease that my sister used on my two ponytails lost the battle every time to these little coils. The hot comb heated up on the stove only on Sunday mornings for church helped a little until I ran, jumped, and played - essentially sweating away the heated straightness away. In my young, beautiful mind, peas were evidence of a girl who was "not pretty" so when they showed back up, I tried to hide them. Anti-Blackness operates in a totalizing fashion impacting every aspect of one's daily life. When it is experienced through bodily features such as hair, its internalizations feel normal. I am

not alone in carrying the burden of my own natural female Blackness from childhood into womanhood. hooks speaks of "talking race." "For some of us, talking race means moving past the pain to speak, not getting caught, trapped, silenced, by the sadness and sorrow." (hooks, 1995, p. 5). For many Black women, this begins early in life.

My mother and older sisters chemically "straightened" or permed their hair. As a young girl, there was never really any question that I would, as well. I did not grow up in a household celebrating women, Black Power, and natural hair. On both sides of the family, the power of Christianity was revered first and foremost. And, for the most part, women in the church permed their hair. Even today, there are markers denoting Black, natural hair as "unchristian." As a young girl and teen, when I did see natural hair, it felt historical - something from the past (the 1970s with Afros) or heathenistic – something wild, untamed, and possibly immoral. The internalization of these racist tropes lingered into my teens. Until the age of ten or eleven, I had worn almost exclusively two ponytails. That's about all my mother or sister could do with my densely coiled hair. As a young woman, being able to perm my hair meant that I was no longer a child. I was growing into a young woman who could wear hairstyles that were mature. I continued this practice of chemically "straightening" my hair until middle age. Even as I learned of the harm this process caused, I continued. As an adult woman, I chose to continue even as I saw the incredible beauty of natural Black hair. I had no understanding of my own, natural hair.

As a burgeoning literacy educator, reading *Happy to be Nappy* provoked a sense of joy within me. I also remember feeling shame at seeing the word *nappy* in the public imaginary. Hearing the word nappy felt as if I needed to protect myself, but imagining the word in the mouths of people who could utter it without the care and understanding of its racial context felt downright frightening. A young, Black girl may hear the clarion call to stand pridefully and display her natural hair, skin, and features. However, reading texts such as *Happy to be Nappy*, for young girls, is not merely an intellectual endeavor. It is one steeped deeply in what hooks often referred to as the "imperialist white supremacist capitalist patriarchy" in which we reside.

Loving as Curricular Praxis: Creating Space to Empower Black Girls to Love their Natural Hair

At the end of each school day, we had to get in line at the back door and wait until the final bell rang. The teacher would open the door, and everyone would dash out to go home. Everyone would

get excited because it was the end of the day. Everyone except me. As much as I could, I would push and shove my classmates, almost clawing my. way to the front of the line…. because when that bell rang, I had to start running….

"She's ugly! Black, f-, n-," he said.
My heart was beating so fast. I kept silently praying for someone to come and save me.
- Viola Davis, *Finding Me*

I read the first chapter of Davis' autobiography slowly stopping often to think, but mostly to breathe and consider how little Black girls learn to love themselves within school contexts. I had to breathe through the pain and sorrow of remembrance. In my elementary years, images of pretty were defined by book images of little blue-eyed girls with yellow, curled hair in two pigtails. These little girls were allowed to get into trouble and *be naughty*. At their core, they were considered to be wholesome and good. These adventurous schemes were not intrinsic to their nature, they were merely instances of rebellion easily forgiven and forgotten. Books like the Golden Books series also featured anthropomorphized puppies and trains, but all of the little girls were drawn very pale skinned and golden-haired. I was not a yellow haired, blue-eyed girl, but I loved to read, so I attached myself instead to stories with trains who knew defeat and wild things who lived worlds away.

At home, being pretty was first and foremost important to me personally because I was the third girl, and I had two, beautiful, older sisters. Their beauty was held in my eyes as the little sister who beheld them, but also in accordance with cultural and Colorist norms of beauty. I yearned for this beauty. In the social context of my schooling, my Black hair and features meant I was "not pretty." Compared to my sisters, my hair was coarse, but it also grew past my shoulders and could be stretched down my back. In the norms of beauty that I encountered in my young Blackness, this was seen as a saving grace. My father called our hair our "crowning glory," and we were not allowed to cut away this glory. The thick concoction of patriarchal norms of my father's love, alongside the shameful navigations around my coarse, tightly-coiled hair, pervaded almost every sensibility I had in navigating the white supremacist norms around beauty.

Teaching books like *Happy to Be Nappy* is a testament to the love Black girls and women have for their natural hair. hooks defines love as one's ability to spiritually connect and uplift one another. It is not based on romantic notions or familial ties. Instead, it is a commitment to living a life shared with and in

communion with others. Throughout numerous books, she centers love on an academic enterprise – one that can be investigated, critiqued, and celebrated.

Politicizing Black Girl Literature: Beyond Mirrors and Windows

> *"…all the great movements for social justice in our society have strongly emphasized a love ethic." (hooks, 2000, p. xix)*

My schooling experiences were extremely varied in socio-economic levels. I attended schools that were wealthy and white and others that were almost all Black in varying socioeconomic levels. In none of them, did I experience a curriculum designed for me to honor and respect myself as a Black girl. When I attended college, I was introduced to Black feminisms for the first time. Along with the introduction, I saw Black women who wore their hair in natural styles as a political act.

Reading Black feminists like bell hooks for the first time as an undergraduate student meant meeting powerful and life-changing representations of female Blackness that had not been a part of my world. This was a world where my previously perceived weaknesses were seen as strengths. There were Black intellectuals, feminists, and communists - women who had chosen to decolonize their minds, bodies, and hair from historical, sociocultural normative oppressions.

Later, reading hooks' (2014) *Teaching to Transgress: Education as the Practice of Freedom* for the first time in my teacher preparation program, I learned of hooks' theorizing around Freire's liberation in conjunction with Thich Nhat Hanh's contemplation or mindfulness as an "engaged pedagogy." hooks argues for an engaged pedagogy that demands "interrogating biases in curricula that reinscribe systems of domination (such as racism and sexism) while simultaneously providing new ways to teach diverse groups of students" (p. 10). This idea of 'new ways' involves the critical acts of interrogating and developing praxis to integrate the critical, cultural, and racial pedagogies needed to break hair bias within schools. Empowering young Black girls within literacy pedagogies is crucial. As a literacy educator, selecting and reading texts that celebrate the beauty of Black girls' natural hair has political implications.

When bell hooks wrote *Happy to Be Nappy*, there were almost no published books focusing on the hair of young Black girls. In 2019, the Cooperative Children's Book Center (CCBC) reported that of the children's and young adult books published, 22.9% were written by BIPOC authors, and 28.8 % featured

BIPOC characters (CBCC, 2021). Alongside the ever-increasing numbers of Black and Indigenous People of Color (BIPOC) students in U.S. public schools (NCES, 2018), the critique surrounding the diversity of children's literature in elementary school classrooms continues (CCBC, 2021; Lee & Low, 2021).

Today more than ever, there is a need for children's texts featuring positive images of Black girl hair. At the time of hooks' publication, only one other text shows up, "I Love My Hair," written by Natasha Anastasia Tarpley and published in 1998. A Google search uncovered twenty-seven such texts (see list below). While a trend towards increased numbers of books by and about BIPOC may seem encouraging, the Bureau estimates that, by 2045, BIPOC population numbers will total approximately 56%. Clearly, the numbers tell a significant part of the story; however, concerns about classroom teachers' critique and activism surrounding diverse children's literature within elementary classrooms are equally compelling (Ghiso & Campano, 2013; Kinloch, Burkhard, & Penn, 2019; Morrell, 2007). In order for literacy educators to orient their young students towards a perspective of *mirrors and windows*, they must develop and understand how they can take up a critical and active stance in their classrooms.

The teacher workforce has been comprised mainly of White, female, middle-class teachers whose understanding and relation to Black girl hair may be minimal, but whose impact on Black girls has been shown to be harmful (Mbilishaka and Apugo, 2020; O'Brien-Richardson, 2019). A common entry point to diversifying literacy for young children has been the "mirrors and windows" approach. Emily Style (1988) initially introduced the phrase "mirrors and windows" as a metaphor for connecting children, literature, and the world. Later, Ruth Sims Bishop (1990) eloquently re-charged this metaphor, inciting its relevance in the face of a paucity of diverse children's literature. Through the use of mirrors, students' cultural identities can be seen, acknowledged, and validated. A story is a mirror when it reflects children's culture and builds and reinforces a sense of identity. These mirrors "help us see ourselves in relation to the world and help us build connection and a sense of belonging" (Kawi, 2020). A window is a resource that offers children a view into outside experiences - a way to look into the lives, experiences, and cultures of others and the world.

The current climate of literacy instruction implores educators repeatedly to diversify their classroom literature. It is an important measure in cultivating cultural pedagogies in the classroom. However, the literature around hair bias asks for so much more. Diversifying the literature and integrating cultural materials such as the Sesame Street video "I love my hair" (Lincoln & Hopper, 2010) will assist in developing educational experiences that do not harm Black girls and may even enrich their experiences. However, it is just the beginning.

The National Council of Teachers of English (NCTE) issued two propositions, both of which interconnect the need for increased diversity and advocacy in the integration of children's literature in elementary classrooms (NCTE, 2015; 2018). It is clear that Black girls need diverse literature, but they also must be taught political praxis.

Referring to Stetsenko's (2016) *transformative activist stance* (Stetsenko & Arievitch, 2016), NCTE's (2018) resolution to better prepare teachers to know children's literature, they encourage teachers to affirm diversity and exercise critical literacy through activist projects. Critical literacies recognize literacy as a muscle to be exercised, inseparable from equity, and a tool for liberation (Patel, 2021); critique social narratives (Leland, Lewison, & Harste, 2012); unify a collective vision of educational justice and human rights (Campano, Ghiso, Rusoja, Player, & Schwab, 2016); a vehicle for community literacy (Feminist, L., 2001); and a deterrent to toxic literacies (Taylor, 1996). Connecting young children to activist projects that impact their own lives is one way to move towards liberation.

Discussion

> Today, as I attempt to do my own work I am struck by the growing number of scholars of color who have chosen to go back into those fields, construction sites, and kitchens to give voice to their own people—their perspectives, worldviews, and epistemologies" (Ladson-Billings, 2000, p. 270).

In this paper, I have chosen to share my personal accounts – they are stories that I mostly have kept hidden from public view. I worked to remember painful aspects of my child and young adulthood. This was not an easy task. Bringing these moments to the foreground meant making myself vulnerable to the public eye. In this work, I have turned to bell hooks as a grandmother (Dillard, 2019) to guide me through these navigations. I imagine her with her softly plaited her, kind smile, brilliant intellect, and unending love.

Counterstories resist traditional norms of qualitative research. CRT and Black Feminist frameworks assert voice and storytelling thus negating mostly quantitative calls for significance, validity, and generalizability. Presenting my narratives here is not a claim for legitimation or generalizability. However, when considering an alignment between hair bias for Black girls in schools and K-12 literacy instruction, there is a need for ongoing research and action. Continued research on hair bias and Black girls' stories, identity formations, and health is needed. Researchers are expanding the study of hair by creating new

methodologies and methods. Mbilishaka (2014) has designed the Guided Hair Autobiography (GHA), an instrument of qualitative data collection measuring the hair-related life experiences of Black women. The instrument asks participants to relate, specifically, three hair experiences: (1) hair earliest memory; (2) 'hair nadir experience' - the author describes this as the most negative hair experience; and (3) 'the turning point' - a moment in which the participant experiences a 'change of heart' about their hair. Mbilishaka also created the PsychoHairapy Research Lab in the Department of Psychology at Howard University.

Going natural implores Black women and girls to have better health. Norwood (2018) argues that going natural resides at the center of Black women's 'health and well-being':

> Different from the 1960s and 1970s, the focus is not on Black power race politics, nor is it about authenticating "Blackness," "good" versus "bad" hair, or the politics of hair respectability, which narrowly delimits the performance of Black femininity. Today's natural hair movement is about Black women across social classes making decisions to promote their health and well-being. (p. 80)

When discussing Scott-Ward's documentary Back to Natural (2019), Scott-Ward, Gupta, and Green (2022) refer to the healing process of going natural. Straightening one's hair with chemicals takes a toll on the physical and mental health of Black women and girls, often causing a dissonance between the personal and the public. One's personal life can be filled with outward success or health and happiness, while the ongoing and psychological toll of managing the expectations of the workplace and school environments grows daunting. Scott-Ward adds to this the task of Black women going natural who have to, usually after decades, learn how to care for their hair: "To figure out another thing, like learn how to manage my natural hair, and not the "deadened" and literally flattened version of it which I was familiar with, was too much at the time" (p. 927). For many Black women, going natural encapsulates a movement towards healing and better health.

Black girls need and deserve protection from the harm of hair bias and educational tools to support them in understanding their own beauty and worth (Biederman, et al., 2010). The Creating a Respectful and Open World for Natural Hair Act (thecrownact.com) legislation seeks to halt the "denial of employment and educational opportunities because of hair texture or protective hairstyles including braids, locs, twists or bantu knots" (thecrownact.com). Led by the CROWN Coalition, they have passed legislation in 19 states protecting Black

women and girls from race-based hair discriminatory practices. For the past three years, they have celebrated CROWN Day embracing Black Hair Liberation. Mbilishaka and Apugo (2020) make the following recommendations: (a) continuing to seek out and nurture spaces that embrace, affirm, and promote healthy representations of Black girls and their multifaceted identities. More specifically, spaces that represent Black girl's identity and cultural expression as it relates to their hair. Therefore, professional and educational spaces must make themselves aware of the traumas oftentimes faced by Black women and girls' hair along with the long-standing history of apartheid involving Black women's hair aesthetics; also (b) Black women and girls must continue to be empowered to speak out in regard to their educational and professional experiences with their hair, and (c) [embed] the access and utilization of embedded, culturally conscious, mental health services and clinicians within professional and educational environments that allow Black women and girls to process the emotional and psychological repercussions that may arise due to their hair and its presence in institutional settings and beyond. (Mbilishaka & Apugo, 2020, p. 647).

Essien and Wood (2020) recommend their HAIR approach – 'hone' educators' learning about Black hair, 'affirm' to young Black girls the beauty of their natural hair, 'intervene' when they are bullied, debased, and humiliated, and 'refrain' from touching Black girls' hair as a matter of school policy.

Conclusion

As a Black woman, my experiences in going natural have drawn me to rediscover hooks' (1999) *Happy to Be Nappy*. I am still going natural - back to nature, back to my natural roots. I find myself wondering about the political and social journey young Black girls undertake when they choose to not use a chemical relaxer. Other Black girls will put a little chemical on and call it natural, and still others will smooth their hair with full use of chemicals. Whatever their mothers choose – whatever they choose – it is a quest to be happy – to be fully self-actualized and self-loved. This is no less true for Black girls in schools. It has been a joy getting to know my hair. I find it delightful as I watch it take on different contours, shapes, and textures. It aggravates me when it "won't behave" or do what I want it to do. However, mostly it has become a halo – my crowning glory. Not exactly as my father imagined for me – but as I imagine for my own well-being.

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DISSERTATION WINNER

BUILDING FROM TEACHERS' KNOWLEDGE: CO-CONSTRUCTING DIGITAL LITERACY CONCEPTIONS THROUGH COLLABORATIVE ONLINE PROFESSIONAL DEVELOPMENT

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Abstract

The last two decades have witnessed the increasing ubiquity of digital literacies both in and outside of schools. In light of the shift towards digital literacies, researchers have emphasized the need for teachers to be supported in learning about digital literacy pedagogy through professional development (PD) that focuses on technology in relation to literacies and local classroom contexts, rather than on technologies in isolation. In addition to the rise of digital literacies, the shift to virtual learning that occurred during the COVID-19 accelerated an existing trend in teachers' PD activity towards learning in online environments. Researchers have emphasized both the opportunities and challenges of online PD, though research in this area has been mostly large-scale and quantitative. Few qualitative studies have examined teachers' in situ experiences learning about digital literacy during online PD. Responding to these needs, this qualitative case study examined the learning experiences of five middle school literacy

teachers over the course of a semester-long, online professional development program focused on digital literacies. The findings highlight (a) the teachers' use of their own literate knowledge in constructing new conceptions of digital literacies, (b) their constructive and collaborative learning practices in dialogue with research and (c) their uptake of varied and multifaceted resources for learning.

Keywords: Digital literacy, professional development, case study, in-service teacher education, online learning

Introduction

As digital literacies have become more commonplace in schools, literacy researchers have called for studies examining how teachers learn about digital literacies and develop related curriculum and pedagogical knowledge (Hobbs & Coiro, 2019). Developing understandings of curriculum and instructional practices related to digital literacies often requires paradigm shifts about the nature of learning and literacy more broadly (Leu et al., 2013). Conceptual change itself, within any profession, is already complex (Zengilowski et al., 2021). Teachers engaged in the process of conceptual change must also develop new pedagogical understandings that require complex thinking (Darling-Hammond et al., 2017; Nash et al., 2021). Thus, understanding how teachers engaged in professional development (PD) construct and develop their conceptions of digital literacy is an important topic that has thus far received insufficient attention in existing research on teacher education and professional development (Hutchison & Woodward, 2018).

Moreover, the Covid-19 pandemic, and the resultant closure of in-person activity for both teachers and students, has accelerated an existing movement towards online learning environments for classroom teaching and teachers' PD (Lay et al., 2020; Webb et al., 2021). Although a substantial body of research exists related to online PD, few researchers have examined teachers' in situ experiences during synchronous online learning (Powell & Bodur, 2019). At a time in which online learning is becoming normative in myriad contexts, researchers have called attention to the need for detailed and contextualized qualitative studies examining the ways in which teachers learn together on the internet (Pinar et al., 2021).

To address these gaps, this case study examined the experiences of five in-service middle school language arts teachers engaged in a semester-long, online professional development course focused on learning about and designing a curriculum related to digital literacies. This case study focuses on the teachers' learning processes, and draws from a larger qualitative study that encompassed

the teachers' conceptual understandings, professional identity development, and curriculum design (see Nash, 2022a; 2022b). The PD occurred over the course of 11 two-hour sessions during Fall 2020 and was designed and conducted in line with the National Writing Project's approach to teacher learning (Whitney et al., 2008), in which teachers draw upon their own experiences as readers and writers to inform curriculum design. In this study, I sought to explore how teachers learn online in participatory and agentive environments. To do so, I asked the following research question: How did a group of middle school English teachers engage in learning over the course of a semester-long, online professional development course focused on digital literacies? In the findings, I examine the experiences of the teachers, focusing not so much on *what* the participants learned, but *how* they went about their learning: the processes, activities, and resources that mediated their learning.

Theoretical Frameworks

Sociocultural Views of Teacher Learning

To analyze teachers' learning processes, I drew upon sociocultural conceptions of literacy and learning. From a sociocultural view, literacy is not a single skill that exists independently of cultural contexts; rather, literacy refers to a multiplicity of meaning-making and communication practices that are employed to *do* certain things in certain contexts (Gee, 2015; Street, 1984). These contexts include localized communities and learning environments in which learners engage not only through explicit instruction, but also through enculturation and situated practice (Lave & Wenger, 1991; Vygotsky, 1978). Learning and literacy development, in this sense, happen through engagement with peers and more experienced mentors in particular settings. This approach applies as much to the learning of teachers as it does to the learning of children or any other human beings for that matter (Putnam & Borko, 2000).

In this study, this approach to learning and literacy was applied in two distinct but overlapping ways: first, the teacher participants in the study were learning within a particular, culturally- and historically-situated context (e.g., in a small professional learning community at a middle school in the Southwestern United States in the year 2020 amidst a global pandemic). I thus examine their learning with this context in mind. Second, the teachers took up digital literacies from a sociocultural perspective. They were learning about digital literacies with a mind to how they could best prepare students to engage with digital tools in real contexts of use, rather than in isolation or exclusively in relation to school-based purposes. The two applications of sociocultural theory were reciprocal, in that

the content of the PD design informed the ways in which teachers were invited to learn and thus informed the findings of the study.

Inquiry as Stance

As a related framework for considering teachers' collaborative professional development, I drew upon Cochran-Smith and Lytle's (1999) conception of inquiry as stance. This view emphasizes the centrality of practice-based knowledge to teachers' professional development as well as the value of knowledge generated within practice-oriented contexts. In today's cultural context, in which teachers receive pressure to suppress contextual, experiential knowledge in favor of established, standardized curricula and instruction (Philip et al., 2019; Zeichner, 2010), this emphasis on teachers' experience and knowledge is sorely needed.

Inquiry as stance emphasizes the value of the work teachers do in community as they draw upon knowledge both from classroom spaces as well as from external sources. Cochran-Smith and Lytle emphasized the deep connection between (a) knowledges formed and drawn from within classroom spaces and (b) theories and research from outside of the classroom. This approach also emphasizes the socially and politically situated nature of both pedagogical and external sources of knowledge (Putnam & Borko, 2000; So, 2013). The traditional separation between practice-based and theoretical knowledge has led teachers' practice-derived knowledge to be positioned in a lesser position, harming both teaching as a profession and the field of literacy research at large (Cochran-Smith & Lytle, 1999; Giroux, 2013). Bucking this tradition, teachers working in community together from an inquiry stance are able both to develop as professionals and generate new understandings to support innovative approaches to literacy curricula and instruction.

Literature Review

Researchers and professional organizations have emphasized the need for teachers to have opportunities to learn about the ways in which digital tools can shift or transform literacy practices and classroom instruction (Coiro, 2012; Hutchison & Woodward, 2018; ILA, 2018; NCTE, 2019). The increasing attention to Technological Pedagogical Content Knowledge (Koehler & Mishra, 2008) or to the ISTE (2017) technology standards for educators have helped provide frameworks by which teachers and teacher educators can more readily consider how to develop their own digital literacy knowledge and incorporate digital literacies into curriculum and instruction.

Research on digitally-focused PD in literacy has pointed to the importance of emphasizing the classroom integration of new technologies, rather than on the mechanics of technological tools themselves (Hutchison & Woodward, 2018). However, when examining existing opportunities, scholars have lamented that PD for teachers has tended to foreground the mechanics of technologies such as websites, apps, or devices instead of teachers developing content- and classroom-specific knowledge and frameworks (Johnson, 2016). Scholars have also critiqued technology-focused PD plans as being too short for real rethinking or learning to occur, and for being decontextualized from teachers' schools, content areas, and classrooms (Lawless & Pellegrino, 2007).

The body of research that has focused on teachers' learning to incorporate digital literacies within classroom spaces focuses largely on learning how to use technologies and digital tools into existing literacy instruction (Ciampa, 2016; Mouza & Barrett-Greenly, 2015). Fewer studies have explored teachers inquiring into the ways in which the digital practices of students play a role in literacy curriculum and instruction. This emphasis on technology runs counter to literacy researchers' arguments that "the most promising research focuses less on technology as tools and more on digital texts as types of literacy practices" (Rowsell et al., 2017, p. 158). Although many studies have examined pre-service teachers and university students learning about digital literacy practices and associated concepts such as multiliteracies (McLean & Rowsell, 2013; Schieble, 2010; Skerrett, 2011), only a handful of studies have been conducted considering how practicing teachers learn to integrate digital literacy practices into their curricula and harmonize these ideas with existing curriculum and ideas about teaching (Johnson, 2016).

The current study is situated in conversation with and response to the body of existing literature on digital literacy PD. Reflecting the calls of researchers for PD situated within teachers' lived contexts (e.g., Darling-Hammond et al., 2009; Hutchison & Woodward, 2018; Hobbs & Coiro, 2019; Smagorinsky, 2018), this study was conducted within one school and with one English department. In contrast to professional development in which teachers learn to enact predetermined pedagogies or approximate established theory, teachers in this study were framed as inquirers and constructers of both new knowledge and curriculum.

Methodology

This qualitative instrumental case study (Stake, 2005) focused on five middle school language arts teachers' learning processes during a semester of PD meetings focused on developing understandings of digital literacy and designing

related curriculum. Throughout the semester, the teachers focused specifically on teaching digital reading in ways that were responsive both to the contemporary information environment and to the cultural knowledge that their students brought to the language arts classrooms. The specific case study reported here was part of a larger study that considered not only the teachers' learning processes, but also their emergent conceptions of digital literacy and the curriculum they designed (Nash, 2022a).

Case study was chosen as a methodological approach that would facilitate an in-depth examination of the teachers' learning processes, including their voices and perspectives on their learning (Thomas, 2016). Case study has often been employed for this purpose, particularly when researchers are seeking to examine activity bounded within local, historical, or cultural contexts (Flyvberg, 2011). Lastly, the study occurred online, as PD sessions were held weekly through Zoom in the midst of the COVID-19 pandemic. Given the lack of detailed attention to teachers' learning processes during online PD (Powell & Bodur, 2019), case study also served as a method that would allow for powerful contributions to the literature on how literacy teachers learn together online.

Context & Participants

This study was conducted over the course of one semester and focused on a weekly professional development series held for teachers at Southside Middle School (SMS). SMS was located in a large city in the U.S. Southwest and serves a population of 500 students from largely working class families, with a student body that predominately (85%) identifies as Latinx/Hispanic. The participants in the study were five middle school teachers in the Language Arts/Reading department who agreed to engage in professional development to support their teaching and curriculum design. Three of the five teachers identified as Latinx/Hispanic and two identified as White; three identified as women and two as men.

The study was also conducted in the midst of the COVID-19 pandemic. At the start of the semester, and for much of the time during which the study occurred, courses at Southside Middle School were held online, a first for both the students and teachers. This context, though not anticipated when the study was originally designed, created a distinct circumstance for the PD, given that the teachers were learning about digital literacies though an online platform themselves while also teaching online for the first time.

The professional development sessions were held weekly on Zoom on Friday afternoons. The PD structure was co-designed by the researcher and the

school's department chair, Charlie, who was also a participant in the study. The semester was organized to allow participants some agency in their learning and curriculum design. Knowing that decontextualized PD tends not to have lasting results, the PD designers were intentional about creating a space in which teachers could have thoughtful discussions about digital literacies and design bespoke curricular approaches that fit their local context, rather than learn to implement established pedagogical practices.

Finally, although this case study is focused on literacy teachers' learning processes, the findings may best be interpreted with some background knowledge regarding the concepts and curricula they developed. As they examined contemporary contexts for digital reading practices, the teachers' emphasized the sociocultural, critical, and affective dimensions of digital engagement, a contrast to the largely cognitive emphasis in existing digital reading research (Turner et al., 2020). The curriculum they subsequently designed reflected these concerns, inviting students to critically examine the contexts of their own, outside-of-school digital reading practices.

Data Collection and Sources

I undertook data collection in the summer of 2020 and concluded gathering data in January 2021. Data sources were ethnographic in nature and were drawn primarily from the context of the PD seminars. Sources included two sixty-minute semi-structured interviews, recordings of PD sessions captured through the Zoom platform, field notes and analytical memos based on PD sessions, artifacts created by participants as part of their learning experiences, and transcripts of the Zoom chat (see Nash et al., 2023 for more details regarding the role of the specific platform in teachers' learning). During the sessions, participants created both individual and shared documents and artifacts. These included visual representations of their online literate lives that were shared with the group, Google Slides presentations that the group designed and delivered to each other, reflective writing, shared lesson planning and curricular documents.

Following each week's PD session, I transcribed the recording of the session, expanding the data by adding contextual notes and writing analytic memos. I conducted two semi-structured interviews with each participant, prior to and following the completion of the PD semester. Questions focused on the teachers' experiences with digital literacy in and outside of the classroom, the learning they experienced during the semester, and the relationship between their PD experiences and their curriculum design.

Data Analysis

Data analysis occurred continually throughout the semester using the constant comparative method (Strauss & Corbin, 1990). In this approach, data are analyzed as they emerge from the collection process. Following transcription, I re-examined each data source three times, applying open codes upon the third read-through in an inductive fashion (Saldaña, 2016). I chose open, inductive coding as an extension of the theoretical and methodological foundations of the study, using a coding scheme that could best capture the emergent experiences of the participants in context. Mid-semester, as the teachers moved from conceptualization to curriculum design, I began a second round of data analysis related to their learning in the first half of the semester, re-reading data and collapsing open codes into second round codes based on thematic similarities (Thomas, 2016). Once data collection was completed, I again collapsed codes into third round codes, or thematic categories, that served as the basis of the findings. To provide one example of the progression of codes, the open codes "podcasts," "own texts," and "bringing resources from home" were ultimately subsumed under the thematic category "using multifaceted resources" which served as the basis for the third finding in this study. I worked to establish trustworthiness for the study by carefully triangulating data across sources. I did so by creating an Excel document with data sources listed as columns and thematic categories as rows. I copied and pasted quotations and other examples from the data aligned to each category and data source, ensuring that findings were robustly represented (Merriam & Tisdell, 2016). I also conducted ongoing member checking throughout the semester and following the completion of data collection, sharing examples of the coding and analytic memos with participants (Miles et al., 2014).

Findings

Through data analysis, three central findings emerged related to teachers' learning throughout the semester: (1) teachers built on their existing literacy experiences and pedagogical knowledge, (2) engaged in dialogic learning in community, and (3) utilized multifaceted, teacher-selected resources to support their conceptualization and curriculum design.

Teachers' Building on Literacy Experiences and Pedagogical Knowledge

In contrast to most professional development, the teachers in this PD did not consume and enact predetermined knowledge or curricula. Rather, they took an active role in constructing new conceptions and pedagogies related to digital

literacy. The first PD session began with teachers sharing their impressions of what it means to read online. From the outset, the participants were recognizing, valuing, and sharing their own ideas, using their thinking and experiences as valued material from which to build understandings of how online reading functions. Between the first and second sessions, the teachers conducted inventories of their own literacy practices in online spaces, paying attention to their activity on the internet and creating presentations which they shared with their colleagues. These presentations lasted approximately 20-30 minutes each and included visual representations of each participant's literate life online. Each participant used a different medium to showcase their literacies; mediums included a website, a comic strip, poetry, a digital collage, and a selection from a writer's notebook that included writing, diagrams, lists and drawings.

Noticing the initial complexity of participants' thinking, I wrote in a field note on September 18th, shortly after the second PD session: "After these discussions about literate lives, they are almost already building a framework for thinking about online reading through the way they have noticed and observed their own habits in the world and how people read online." Though the teachers read and drew upon research in the sessions that followed, they did so in dialogue with the ideas they had shared in the opening sessions. As Michael explained in his second interview, "I liked that we were able to talk about ourselves first, because it got us thinking, got the wheels turning." Melissa echoed a similar sentiment in her own reflection on beginning by sharing existing literacies:

> Starting with *what I know* and *what my team knows*, and moving from there and talking about that first really helped us home in on what needed to be done next. And it felt personalized; it felt useful. And I was interested and excited…We're honoring what we already bring to the table and using that as a springboard to move forward. (Interview 2)

This constructive approach to incorporating research stands in contrast to the didactic professional training teachers most commonly experience in school settings (e.g., Parsons et al., 2019; Philip et al., 2019).

Dialogic Learning in Community

The participants continued to lead activities for one another based on self-selected topics of interest throughout the semester, increasingly taking on leadership roles in the PD as it progressed. These experiences allowed participants continually to foreground their own thinking, knowledge, and experiences as valuable resources

for constructing understandings and curriculum. In sessions four and five, for example, the teachers individually conducted informal research inquiries on topics that emerged from their initial discussions and presented their work to each other. Topics included disinformation online (Melissa), the emotional and ideological aspects of online reading (Michael), the ways in which readers share information through social media (Claire), and the addictive nature of many digital platforms (Leo).

This emphasis on teachers' own contributions does not mean that they failed to engage with research or other external resources. Participants drew heavily from peer-reviewed research to develop their thinking. Over the course of the semester, they read six peer-reviewed articles, which they engaged with from critical and dialogic lenses. Even when engaging with research, the teachers were active in the way they selected information, questioned external sources, and synthesized new information with salient past experiences or latent knowledge during discussions. As Michael explained, "I liked that (we were) looking at the research and not just taking it at face value, but thinking about how it fit in with our own students and with our own classrooms and with our own experience… it made us feel like we were in control and like we developing professionally." In the following paragraphs, I take up one example in greater detail to showcase the ways in which a participant collaborated with and spoke back to an article to develop new meanings.

In the second PD session, Melissa constructed a new understanding of how readers engage in meaningful transactions with texts online by building upon and pushing back against research. She did so by drawing upon her own experiences as a reader and other readings she had encountered to engage dialogically with an author; describing Salmerón et al.'s (2018) account of information integration online, Melissa explained:

> He says a lot of stuff like "the text's author will normally facilitate such processes of integration," and "The author of a single text normally aims to present a coherent story or description." So, there's this idea…that internet sources generally try to aid you in the process of integrating information and creating an accurate mental representation, but I think it's really interesting to think about the ways that people are deliberately putting out misleading media. And I think that's an important point to include in whatever (teaching) we do, like, sometimes (readers are) purposefully miscued online. Like they (texts/authors online) are not always out to aid us and we need to think about that too.

Here, Melissa highlighted that the conception of how authors are conceptualized in the existing literature - as well-intentioned facilitators of understanding – did not align with her observations and experiences as a reader online today. In identifying this difference, she did not dismiss the research, but used the information in the article as a spur to prick the sides of her own thinking about how authors and readers transact online. In this process of building on research, Melissa agreed with Salmeron et al (2018) about the importance of information synthesis and critical evaluation. However, interacting with the text dialogically, she built upon these ideas by highlighting that synthesis and evaluation take on new dimensions in an informational environment in which disinformation and manipulation are rampant. This serves as just one example of how the teachers used research as a resource in the context of their own thinking to develop ideas about digital literacies. This kind of emergent and co-constructed understanding is particularly important for developing digital literacy pedagogies, which must be fluidly adaptive to rapidly changing technologies (Leu et al., 2013).

This willingness to question research or to engage in dialogue with authors was not limited to Melissa or to this session. Throughout the PD sessions, participants combined their own observations with what they learned from research literature, and at times, posed critical questions of the research. Leo, for example, questioned one article's emphasis on building comprehension strategies online, drawing upon his experiences with students to consider other starting points. In Session 6, Michael was critical of Rowsell et al.'s (2017) positioning of teachers, arguing that, while he agreed with the general concepts of the article, he felt that the authors' suggestions for practice seemed disengaged from classroom life and more suited to policymakers than educators. This led to a discussion of the burdens placed upon teachers, a particularly salient topic given the larger pressures they felt related to learning multiple new teaching formats (fully online and hybrid), combatting a global pandemic, and their school's continued emphasis on testing (Heim, 2020). These dialogues with research highlight the role of participants' construction of new ideas, concepts, and critiques as they drew both from research and from their own lived contexts.

Utilizing Multifaceted, Situated Resources to Build Understandings

In addition to drawing from research and each other's experiences, the participants brought in a wide range of sources as they constructed understandings of digital literacy. In this way, their work represented another form of digital learning; in addition to learning that occurred through videoconferences, participants

utilized one of the central affordances of the internet – access to myriad resources that can be drawn upon and shared instantly – to inform their learning (Wegerif, 2015; Rodesiler, 2020). These resources included ones participants engaged with on their own, as well as resources their colleagues shared during PD sessions. From the outset of the PD sequence, during which the participants conducted inventories of their digital literacies and shared them with one another, a wide-ranging inquiry was encouraged and celebrated. In the first session, participants began to draw upon their own literate lives as valuable sources for curriculum, following in the National Writing Project's tradition of conceptualizing curriculum through the lens of teachers' own lives as readers and writers (Lieberman & Wood, 2002; Whitney et al., 2008).

In attending to their own literacies, the teachers began to bring to the discussion texts about digital literacy, as well as texts that they saw as having relevant implications to today's digital cultural context. Sources participants drew upon were wide-ranging and included books (*Report of the Select Committee on Intelligence United States Senate on Russian Active Measures Campaigns and Interference in the 2016 U.S. Election, Tao Te Ching, The Strange Fascinations of Noah Hypnotok,*), podcasts (*Land of the Giants, Rabbit Hole*), television shows (*Attack on Titan*, *Unorthodox*), TikTok videos and memes, Youtube channels and videos (*How to Cook That, Abbey's Kitchen*), Facebook posts, Instagram accounts (*Celebface*), and video games (*Age of Empires, Civilization, Breaking Harmony Square*).

Participants utilized these sources to develop a multifaceted conception of what reading online is like today. For example, Michael and Leo each listened to podcasts (*Rabbit Hole* and *Land of the Giants*, respectively) that highlighted the ways in which large corporations used web algorithms, targeted content, and other features of internet platforms to guide online readers to specific content and create addictive internet habits. In her second presentation to the group, Melissa shared Youtube videos and Instagram posts that highlighted how manipulative language was used to spread disinformation or trick readers and viewers. Claire drew upon multiple television shows and Facebook discussions to develop an understanding of the emotional dimensions of seeking information online, with a particular focus on how readers come to share (often inaccurate) content through social media. In his final interview, when asked what sources of information he found valuable for his learning, Michael highlighted the menagerie of media that he drew upon as he developed his ideas with the group, emphasizing not only media from his own life, but also media shared by his colleagues: "One cool thing about this project was that there were a lot of different types of media to draw on. And again, everybody brought stuff; it was kind of coming from

everywhere, and it all was really valuable." Michael's comments highlight not only how the participants drew upon texts from their own lives, but also shared these texts with each other in a form of dialogic education that facilitated the creation of shared conceptions and understandings (Wegerif, 2015).

Taken together, these findings highlight the power of self-directed teacher learning in a PD context. In this study, the teachers began from their existing knowledge and experiences, placed these experiences in conversation with existing research, and then drew from a wide range of sources to construct new conceptions and curricula related to digital literacy.

Discussion

The findings in this study showcased the rich potential that can come when teachers are invited to recognize and build upon their existing professional knowledge, generate conceptions related to disciplinary content, and design curriculum together.

Teachers Constructing Digital Literacies Knowledge

These findings reflect and build upon existing research that has highlighted the importance of contextualized learning experiences that allow teachers to take greater ownership over their learning (Desimone & Garet, 2015; Ketelaar et al., 2014; Lambirth et al., 2019). Building on this research base, the findings move beyond teachers acting collaboratively and learning contextually in relation to existing bodies of knowledge or progressive curricula. Rather, the findings show that teachers themselves can function as generators of knowledge and designers of innovative curriculum. In this PD sequence, they did so by attending to their own experiences, ideas and observations as teachers, students, and digitally literate individuals. They drew from a diverse array of resources, building upon one another's ideas in generative discussions, and engaging in dialogic and against-the-grain readings of research. Teachers' ability to generate knowledge and utilize diverse resources are particularly important in PD related to digital literacies, given the breakneck speed at which the technological platforms used for digital literacy change (Coiro, 2012, 2021; Leu et al., 2013). Teachers seeking to provide a responsive digital literacy curriculum need to be able to adapt their thinking and curriculum fluidly as the literacies their curricula take up shift. Thus, PD designed around this kind of constructive, inquiry stance (Cochran-Smith & Lytle, 1999) has the potential to be particularly beneficial for digital literacies curriculum development and instruction.

Teachers' Roles as Professionals

In highlighting the teachers as a frequent source of new learning for themselves and for one another, these findings speak back to the movement to de-professionalize and de-intellectualize teaching as a field (Philip et al., 2019; Zeichner, 2010) and highlight one alternative to the kinds of decontextualized, sit-and-get professional development that leaves so many teachers dissatisfied (Parrish et al., 2020). The findings showcase not only the potential for teachers to engage with sophisticated ideas about teaching and learning, but also to generate these ideas themselves, acting as dialogic partners with researchers or PD facilitators – both in the PD and through the texts read during PD. The fact that their learning occurred through collaborative design work adds to the body of research highlighting the potential that can come from framing teachers as designers (Fowler-Amato & Warrington, 2017; Voogt et al., 2011).

Conclusion

At a time in which reformers seek to strip teaching and teacher education of their complexity and professionalism, these findings showcase the complexity and power of agency-oriented teacher learning and professional development for literacy educators. And at a time in which online learning becomes increasingly normative and digital literacies become increasingly intertwined with conceptions of literacy more broadly, this study shows that online learning venues do not require didactic or rote forms of learning, but rather can be designed to recognize teachers' existing literate knowledge and provide critical, creative, and collaborative learning experiences**.**

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ELEVATIANG LANGUAGING AND LITERAICES FOR EQUITY

DESIGN-BASED RESEARCH TO PROMOTE LANGUAGE EQUITY IN TEACHER EDUCATION

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Abstract

Equity initiatives in U.S. higher education largely disregard language diversity (Conference on College Composition and Communication, 2020), allowing linguistic prejudice to operationalize raciolinguistic ideologies (Flores, 2020). In teacher education, this linguicism risks perpetuating subtractive schooling for generations of bilingual teachers and students. Combining decolonizing methodologies with design-based research (Calderón et al., 2012; Reinking & Bradley, 2008) to disrupt this cycle, researchers and teacher education faculty at a Midwestern Hispanic-Serving Institution built a pedagogical innovation elevating bilingual teacher candidates' translanguaging (García & Wei, 2014). Our analysis of the faculty-researcher partnership and candidate case studies illuminates factors enhancing and inhibiting the innovation. Findings indicate that congruence between candidate translanguaging stance and the innovation supported candidates' bilingual writing and teaching, though design limitations underestimated their professional knowledge. Implications encourage transcending a minimalist culture of language inclusion in teacher

education and expanding translanguaging pedagogies while differentiating for bi/monolingual teacher candidate learning needs.

Keywords: language equity, bilingual, teacher education, translanguaging

Introduction

Despite the recent focus on diversity, equity, and inclusion, universities remain largely English monolingual spaces (Canagarajah, 2011; Conference on College Composition and Communication, 2020) where overt racism is discouraged but linguistic prejudice can serve as a proxy for racism (Baker-Bell, 2020; Flores, 2020). Such linguicism censures language diversity in the name of academic language or appropriateness (Flores & Rosa, 2015). Ultimately, teacher education that fails to address these raciolinguistic ideologies risks perpetuating a cycle of linguicism, in which bilingual students endure deficit raciolinguistic perspectives in schooling that subtract or ignore rather than expand their linguistic resources, then must prove bilingual-biliterate-bicultural competence to enter the teaching profession, and finally confront structural oppression through language in the classroom with little preparation (Palmer et al., 2019). This cycle compounds linguicism for bilingual teacher candidates and their future generations of students.

This study shares design-based research (Reinking & Bradley, 2008) intended to counter this cycle of linguicism and advance language equity in teacher education at an urban private Midwestern university where 75% of undergraduate teacher candidates (TCs) and 80% of faculty identify as racially, ethnically, or linguistically diverse. Future teachers in this program are majority Latinx and learned within transitional bilingual education programs, a subtractive schooling model designed to quickly exit students from Spanish-language supports and prioritize English. However, as bilinguals who have navigated many of the same school systems themselves, they are in an excellent position to stop the cycle of linguicism and enact language equity by helping students leverage their full linguistic and cultural assets for learning, using strategies modeled in equity-minded teacher education (Palmer et al., 2019).

Employing design-based research (DBR), our team of researchers and educators determined a worthy pedagogical goal and built a theoretical model to guide initial intervention design. We refined our intervention through cycles of implementation, data collection, analysis, and redesign. Looking across design cycles allowed us to refine the theory and generate pedagogical assertions and design principles to guide work in similar contexts (Gravemeijer & Cobb, 2006). Our study is unique in that it elevates DBR by co-designing with bilingual

teacher education faculty (Gutiérrez & Vossoughi, 2010) and utilizing *decolonizing epistemologies and methodologies* (Calderón et al., 2012) that foreground the experiences and cultural insights of bilingual TCs and faculty. Because of DBR's iterative nature, we can leverage this cultural intuition not only within analysis, but within subsequent designs as well (McCarty et al., 2021). In light of this decolonizing approach, we regard our work as an innovation emphasizing generative thought partnership, rather than an intervention. We believe the term intervention has a deficit-centered connotation, and we want to avoid positioning bilinguals as somehow in need of remediation.

In this paper, we first conceptualize the study's inquiry framework in light of our faculty-researcher partnership, leading to the design of the *Escalera* pedagogical innovation centered on *ourselves, our students,* and *our teaching* (España & Herrera, 2020; Paris & Alim, 2017). We then examine the cases of Ema and Carmen, two focal TCs participating in the innovation during their bilingual methods coursework. The research question guiding the study was, "How can co-designing translanguaging innovations help teaching faculty and TCs identify assets and supports for linguistically diverse student writing?". The study's pedagogical goal was to help bilingual faculty and TCs use the assets they identified through the co-design of translanguaging interventions to expand and leverage linguistic resources in ways that are both flexible and strategic (García, 2009). To this end, we co-designed and refined an innovation featuring essential characteristics derived from contextual factors and relevant literature (Reinking & Bradley, 2008): (1) cultural and linguistic responsiveness (e.g., Ladson-Billings, 1995; Paris & Alim, 2017), (2) emphasizing flexible and strategic translanguaging (e.g., Canagarajah, 2011; García & Wei, 2014), and (3) problematizing academic language (e.g., Fang & Park, 2019; Flores, 2020). The resulting innovation was refined through cycles of design, collaborative data analysis, pattern-finding, and redesign. Our analysis illuminates factors enhancing and inhibiting the innovation, with implications for designing dynamic bilingual pedagogy that advances language equity for teacher candidates and their future students.

Theoretical Framework

Our theoretical framework centered on language equity draws on concepts of linguistic justice, translanguaging, and raciolinguistic critiques of academic language. By applying a language lens to the current discourse around diversity, equity, and inclusion, we focus attention on language ideologies as reflections of societal power dynamics. We also examine attempts to contest these dynamics through language. Specifically, we employ the concept of language equity to

acknowledge and address systemic differences that stem from language ideologies and practices, which intersect with other social identities and positionalities. Culturally and linguistically responsive strategies, defined as those that foreground students' language and cultural identities as assets for learning (Paris & Alim, 2017), help to operationalize language equity in education.

Linguistic justice and *translanguaging* are examples of culturally and linguistically responsive pedagogies that anchor our language equity framework in education. Efforts to promote linguistic justice are part of a broad social justice agenda combating Anti-Black Linguistic Racism, specifically at the intersection of linguistics and education (Baker-Bell, 2020; Charity Hudley & Mallinson, 2018). In linguistics, scholars compared the extensive fieldwork on Black English with the persistent exclusion of Black scholars in the academy, concluding that linguistic justice is intertwined with racial justice (Charity Hudley, 2018). Baker-Bell et al. argue that Black students' very lives depend on foregoing academic language and code-switching in favor of Black Linguistic consciousness (Baker-Bell et al., 2020). In the linguistic justice movement, dismantling academic language as a cover for white supremacy is the central work of linguistics, language education, and teacher education.

Translanguaging, defined as the flexible and strategic use of multiple languages to communicate meaning and to learn, advances social justice in education by honoring the practices of minoritized emergent bilingual learners (García, 2009; García et al., 2017). In both practice and pedagogy, translanguaging theory asserts that bilinguals dynamically combine language features in order to communicate more effectively (Canagarajah, 2011; García, 2009). For example, in a classroom discussion, a Latinx fourth-grade student discussed transnational family bilingualism by translanguaging, "Maestra, es que mi familia on the other side also speaks English. And on this side también hablamos español" (García et al., 2017, p. 10). Although translanguaging has been shown to support student learning, it continues to be viewed as a sign of confusion or limited language ability (Cummins, 2007; Ortega, 2014). Because translanguaging challenges dominant language paradigms, it is often overlooked or outright policed in higher education (Galante, 2018; Horner et al., 2011), where instructors may emphasize language errors and provide limited generative feedback (Ferris et al., 2011; Lee, 2009). In contrast, Canagarajah (2011, 2013) identifies teachable translanguaging strategies such as codemeshing, or strategically merging language varieties in consideration of one's goals and audiences, including interactional strategies like using parentheticals to draw in the reader to the multilingual conversation.

Pedagogies of linguistic justice and translanguaging, by promoting more equitable language education, also critique the valorization of certain language

practices as academic language. Academic language is a now-ubiquitous term for (English) social language thought to be appropriate for academic tasks and help students "build content knowledge, develop advanced literacy, (and) acquire disciplinary habits of mind" (Fang & Park, 2019, p. 1). The specialized terms and text structures, passive voice, and long noun phrases are viewed as facilitating discussion of ideas and academic concepts (Schleppegrell, 2004). However, because it is treated as inherently monolingual and exclusively school-based, privileging academic language over other forms of discourse pathologizes bilingualism and community practices, including translanguaging and Black English (Baker-Bell, 2020; Flores, 2020). As a result, linguistically diverse students are often viewed as needing remediation or intensive support, resulting in less access to advanced coursework and higher likelihood of underprepared teachers (Alim et al., 2016). However, since academic language retains cultural capital, it can hold value for students, even while it peripheralizes their full range of linguistic assets. Despite colleges being "fundamentally multilingual spaces" due to the range of cultural and linguistic resources that students and faculty bring (Conference on College Composition and Communication, 2020), university policy and pedagogy continue to reinforce English monolingual privilege through an emphasis on academic language at the postsecondary level, resulting in a subtractive and hostile linguistic environment (Baker-Bell et al., 2020; Canagarajah, 2011). Conversely, linguistic justice and translanguaging are culturally and linguistically responsive pedagogies that advance language equity in the classroom.

In light of the ways that U.S. schooling perpetuates inequities by reifying linguistic ideological borders between school and self (Pacheco & Hamilton, 2020), we employ language equity to frame our responsive work with bilingual Latinx TCs to disrupt cycles of linguicism in the classroom. The study's theory of change is anchored by language equity: for both faculty and future teachers, the practice of (1) examining one's own language history and assets and experiencing success with translanguaging writing strategies, then (2) identifying assets within one's students' writing, modeling translanguaging strategies, and helping students achieve their own goals using these strategies, (3) reinforces asset-based views of oneself and one's students as writers, expanding curricular opportunities for flexible and strategic language use, and thereby disrupting educational legacies of linguicism.

While efforts to foreground language diversity are increasing (Conference on College Composition and Communication, 2020; National Council of Teachers of English, 2020), without a commitment to language equity, assessment of bilingual student writing often reproduces language hierarchies reflective of societal power dynamics and raciolinguistic ideologies, marking Black and Latinx language practices as incorrect or non-standard while idolizing academic language

(Alim et al., 2016; Baker-Bell, 2020; Baker-Bell et al., 2020; Canagarajah, 2011; Flores & Rosa, 2015). This may lead Black and Latinx students to adopt school-validated English in academic settings, while maintaining other language varieties outside of the classroom, reifying a subtractive code-switching paradigm. Continued work on curricular models for intersectional language inclusion that meaningfully sustain students' language identities, histories, and schooling experiences make responsive pedagogy a forefront of language equity.

Methodology

Design-based research (DBR) provides a process for generating and honing models of responsive pedagogy (McCarty et al., 2021). Our approach to DBR includes two Latinx bilingual teacher education faculty as co-designers (Fowler-Amato & Warrington, 2017; Gutiérrez & Jurow, 2016). While agentive roles for collaborators are not uncommon in DBR, we combine our approach with *decolonizing epistemologies and methodologies* (Calderón et al., 2012) including *testimonio*, an interview method eliciting oral history accounts that have been previously ignored or silenced (Calderón et al., 2012) and collaborative analysis emphasizing *cultural intuition*, which prioritizes bilinguals' unique insights into issues affecting their circumstances and communities (Delgado Bernal, 1998). Using these methods in concert with DBR helps center Latinx perspectives and bilingual approaches to teaching and learning within our innovation design and data analysis, and to sharpen our examination of translanguaging.

Data Collection

Our research occurred over three phases. In Phase One, the researchers and teacher education faculty built knowledge of the context, namely the undergraduate Bilingual Education program of an urban private Midwestern university identified as Hispanic-serving. To inform initial innovation design, the research team engaged in professional readings on translanguaging pedagogy (e.g., España & Herrera, 2020; Lara, 2017) and antiracist language pedagogies (e.g., Baker-Bell, 2020), as well as artifact review (e.g., course syllabi, key assessments, and student performance data). These were followed by semi-structured *testimonio* interviews with the two faculty course instructors which included their personal experiences as bilingual learners, their language autobiographies, and their perspectives on bilingual students' academic writing and funds of knowledge (Cummins, 2006; Moll et al., 1992). We used this information to co-design a pedagogical innovation emphasizing translanguaging within academic writing.

In Phase Two, each bilingual faculty member taught one online undergraduate Bilingual Methods course (25 TCs total) using the co-designed innovation. Researchers obtained baseline TC writing samples through an open-ended survey of TC language biographies and attitudes toward bilingualism and bilingual learners. Researchers then conducted a series of five observations in each online classroom, via videoconference in the synchronous class, and through periodic analysis of discussion board posts in the asynchronous class. Additional TC writing samples were generated through course assignments, collaborative notes, classroom chat, and multimodal presentations.

Data Analysis

Concurrently with data collection in Phase Two, excerpts from observation field notes and transcripts, TC writing, and analytic memos were collaboratively analyzed for emergent themes at biweekly research team meetings using in vivo codes (Saldaña, 2009). This sort of ongoing analysis amidst data collection is essential within DBR, because patterns in the data help the research team determine which features of the innovation seem to be enhancing or inhibiting progress toward pedagogical goals. This disciplined inquiry helps researchers test and refine their hypotheses about whether and how the essential characteristics of their design can accomplish their desired outcome (Reinking & Bradley, 2008).

Phase Three included retrospective analysis (Gravemeijer & Cobb, 2006) to synthesize patterns across design phases, utilizing the qualitative data analysis software Dedoose to store, categorize, code, and analyze data. Organizing data is the first step in the analysis spiral described by Creswell (2007), followed by reading the database and memoing, then classifying and interpreting the data, and finally representing data in research products. Focusing our data analysis on faculty *testimonio* interviews, classroom observation transcripts, and TC writing, the research team first engaged in open in vivo coding following procedures of grounded theory including structural, descriptive, and axial coding (Saldaña, 2009). That is, instead of using predetermined codes, we employed an inductive process to code data samples using participants' own words, then compared our descriptors amongst the research team to calibrate our process and generate code categories, and finally surveyed the data using the categories and descriptors to fully develop our coding tree through data immersion (Creswell, 2007). For example, two paired codes that emerged from this step of data analysis included *value* around bilingualism/biculturalism, and *harm* caused by schools to participants' bilingualism/biculturalism. These codes contributed to our findings related to TCs' translanguaging stance.

The subsequent step of data analysis departed from a grounded theory approach by applying the innovation's essential characteristics and design as an analytic framework. Miles and Huberman (1994) refer to this step as moving "from the empirical trenches to a more conceptual overview of the landscape" (as cited in Merriam, 2009, p. 188). Equally important, this step allowed for cross-coding the data and comparing inductive categories with more deductive categories based on knowledge of existing literature and theory, essentially combining the affordances of both approaches to data analysis (Creswell, 2007). In this step, codes included pieces of the innovation framework (ourselves, our students, and our teaching), the study's pedagogical goal (to help bilingual faculty and TCs use assets identified through co-designing translanguaging interventions to flexibly and strategically expand and leverage linguistic resources), the innovation's essential characteristics (culturally and linguistically responsive pedagogy, translanguaging, and critiquing academic language), and the Chicana Feminist Epistemology guiding study design (paradoxes, counternarratives, and cultural intuition; Delgado Bernal, 1998).

Exploring these analytic constructs provided a sense of their relative frequency (e.g., low incidence of critiquing academic language), highlighted excerpts that served as examples and non-examples (e.g., TC discussions of translanguaging versus language variation), and gave rise to enriched themes contributing to study findings (e.g., a focus on how TCs' lived experiences contributed to their translanguaging stance, including asset-based views of bilingualism). This step allowed us to validate our analysis with member checks by the bilingual faculty course instructors, who read the data drawing on their own experiential knowledge and cultural intuition (Delgado Bernal, 1998). It also helped to winnow the data by selecting focal TCs who represented rich cases for theme exploration (Merriam, 2009).

Because DBR is iterative, we were able to determine not only how the innovation framework of *ourselves, our students,* and *our teaching*, seemed to enhance flexible and strategic language use, but also its limitations. For example, we found that some TCs already held expansive, asset-based views of their students' languages, and did not need to focus a third of the course (in the *ourselves* phase) unearthing and confronting internalized deficit notions. Therefore, treating the framework as a linear process where everyone starts and ends in about the same place was a limiting or inhibiting factor that future designers would do well to avoid.

Finally, the data analysis spiral ended with representing the data in view of research products and producing pedagogical assertions and design principles to guide work in similar contexts. These assertions and principles help the

researchers build a "humble" or local theory about how to accomplish a specific, contextualized learning goal (Cobb et al., 2003). In this way, DBR can guide work in other similar settings.

Findings
Co-designing a Translanguaging Innovation

Collaborative concurrent and retrospective data analysis uncovered the faculty and researcher positionalities, institutional dynamics, and pedagogical histories shaping the initial innovation design and bilingual TC performance. Along this path, our efforts toward a decolonizing research design compelled us to examine our situated roles in collaboration, including the unique insights, raciolinguistic influences, and the broader context of our contributions. To unpack the faculty-researcher partnership at the heart of our design work, we utilized our pedagogical innovation as an analytic lens: examining *ourselves* through our positionalities, then *our students* as bilingual TCs in monolingual teacher education, and lastly *our teaching* as we formulated the pedagogical innovation (España & Herrera, 2020).

Our research team consisted of two undergraduate teacher education faculty and two graduate faculty in bilingual education and reading. The undergraduate faculty included Wendy Mendez, a bilingual, biliterate, bicultural Guatemalan-American educator with expertise in secondary education, literacy, and English as a Second Language/Bilingual Education and Joao Goebe, a multilingual, biliterate, bicultural, Brazilian-American educator with expertise in early childhood and ESL/Bilingual Education. The graduate faculty included Colleen Hamilton, a multilingual white educator raised monolingually in English with expertise in second language learning and ESL/Bilingual Education, and Ryan McCarty, a white English monolingual educator with expertise in design-based research partnerships and literacy instruction (McCarty, 2018). Analysis of these positionalities highlighted the affordances of the undergraduate faculty's pedagogical knowledge, program leadership experience, and sensitivities as bilingual/bicultural faculty trying to disrupt monolingual teacher education. Their expertise provided great insight when identifying opportunities to create translanguaging spaces for bilingual Latinx TCs. These perspectives included an understanding of the tensions that minoritized educators navigate between dominant deficit models and superficial diversity initiatives; the risks of testing institutional commitments to equity by questioning biased practices (e.g., labeling, referral for services, remedial tracking, language separation); and the embedded inequities that elevate white English subjectivities and undermine Black,

Latinx, and bilingual ways of being and knowing–including within our research team of undergraduate (Latinx, bilingual) and graduate (White, monolingual, principal investigators) faculty. We acknowledge yet decry the systemic inequities inhabiting our collaboration, even as we seek to transcend them.

We then analyzed the institutional dynamics that motivated us to partner in designing a translanguaging pedagogical innovation for bilingual TCs. Analysis of faculty interviews revealed three motivating factors: schools' increased need for trained bilingual teachers, deficit institutional discourses on bilingual student achievement, and constraints in implementing academic writing scaffolds. First, teacher education faculty reported increased pressure from partnering schools to graduate bilingual/bicultural teachers in response to changing student demographics. At the same time, faculty noted how narrowly focused, English-only, traditional essay academic writing assignments reinforced deficit perspectives on bilingualism and bilingual student achievement. According to prior institutional research, TCs felt these written assignments carried little relevance to their lived experiences and focused on product over process with feedback being primarily evaluative. Faculty attempted additional academic language scaffolds, including assignment clarifications (e.g., step-by-step video instructions, one-on-one meetings), writing support (e.g., sentence frames, text models), and revision opportunities, and these efforts succeeded in demystifying academic language norms and increased assignment grades. However, faculty noticed that this narrow, time-consuming focus could inhibit the development of ideas and educator dispositions, while conversely preventing many aspiring teachers from entering the profession in the belief that they could not be effective without mastering so-called academic writing.

Observing this compounding deterrent, faculty subsequently shifted focus from remediating bilingual students to empowering bilingualism in the curriculum. Analyzing these faculty members' prior teaching experiences allowed us to understand this shift, and to contextualize the current pedagogical innovation in light of past teaching moves. For example, faculty informally welcomed bilingual assignments (e.g., indicating that a lesson plan could be submitted in Spanish without translation), prompted bilingualism in class discussions (e.g., posing questions bilingually and inviting TCs to respond bilingually), and guided critical reflection on reductive and deficit-centered approaches to language (e.g., using and then critiquing reading fluency and comprehension checklists focused on errors, miscues, inaccuracies, and halting speech). Yet despite these efforts, faculty observed bilingual TCs' reluctance to engage in translanguaging in classroom discourse and academic writing assignments. Having modified classroom policy and pedagogy to encourage translanguaging, in *testimonio* interviews

at the start of the study, faculty outlined the need for more robust curricular changes. For example, they identified opportunities to design assignments that mirror typical teacher writing tasks (e.g., parent newsletters, emails, presentations to peers, formative feedback for students) and that might be undertaken bilingually and multimodally with clear text models. They also considered modeling language bridging in instruction (Beeman & Urow, 2013), multimodal scaffolding (Hesson et al., 2014), critical language inquiry (Baker-Bell, 2020), and differentiated instruction in languages they know personally such as Spanish or Portuguese and even those they do not (Woodley & Brown, 2016).

Ultimately, the faculty-researcher collaboration co-designed a translanguaging innovation centered on *ourselves, our students,* and *our teaching* (España & Herrera, 2020; Paris & Alim, 2017) and conceptualized as the *Escalera* pedagogical innovation. In the first step of the progression, TCs reflect on their own language practices and experiences; in the second step, they conduct case studies of students' linguistic and cultural resources; and in the third step, they design instruction to invite their future students to use language flexibly and strategically. Throughout, bilingual faculty prompted critical discussions on linguicism in schooling while providing tools and strategies that bilingual TCs could implement directly in their future classrooms. This innovation reflected the positionalities of the faculty-researcher team, our understanding of our students as bilingual TCs, and the teaching moves traced above.

Teacher Candidate Case Studies

To understand bilingual TCs' uptake of the *Escalera* pedagogical innovation, we analyzed the work generated by two focal TCs during Phase Two of the study. The focal TCs, Ema and Carmen (pseudonyms), were selected as rich representations of the target participants: both identified as Mexican-American, English Learner, Spanish-English bilinguals with experience as students and future teachers in U.S. schools; both aimed to become dual language bilingual teachers. Ema was a prospective teacher awaiting her first classroom placement, while Carmen already worked in schools as a bilingual paraprofessional. In pursuit of their professional goals, Ema enrolled in the virtual classroom bilingual methods course, with weekly synchronous meetings over videoconferencing, while Carmen enrolled in the asynchronous online bilingual methods course observed for this study. These two courses were taught by the Latinx bilingual teacher education faculty who are co-authors on this paper. This analysis is limited to these focal TC case studies, and is part of the ongoing retrospective analysis that is often part of DBR (Gravemeijer & Cobb, 2006).

This targeted analysis shows that the innovation succeeded in creating spaces for the focal TCs to use language flexibly and strategically in their coursework and lesson planning. Both Ema and Carmen completed all course discussions and assignments, and frequently utilized Spanish and English in their coursework both orally and in writing. Specifically, two themes emerged from collaborative analysis of their writing, observations, analytic memos, and transcripts of classroom instruction.

First, analysis revealed that focal TCs demonstrated a sustained, asset-based translanguaging stance from the beginning of the course. The baseline writing prompt, completed in the first week of the course, asked TCs to draw on a course text (España & Herrera, 2020) and their lived experiences to respond to the question: *How do you see yourself validating and using students' language and cultural practices in the classroom? What obstacles might you encounter, and how would you overcome these?* In response, Carmen wrote, "I am bilingual therefore I see myself using my native language to help Spanish native speakers to learn in both languages…I will value students' culture and see their background knowledge as an asset to the classroom" (Discussion post, start of course). In this statement, Carmen affirmed her bilingual identity and connected it directly to an asset-based pedagogical approach that included leveraging her native language, practicing cultural responsiveness, and activating background knowledge within a powerful modeling relationship of Spanish native speaker teacher to Spanish native speaker student. This quote provides evidence of Carmen's translanguaging stance, that is, her informed and holistic teaching belief that bilingual students leverage their full bilingual resources for learning (García et al., 2017).

Carmen took up this stance despite her own experiences of subtractive schooling in English. She recounted: "My mom put me in monolingual classes because she felt bilingual classes wouldn't teach enough English for me to learn. In elementary school, I felt that the culture and language practice was English only" (Assignment, start of course). In Carmen's schooling, we note the presence of dominant language program models–bifurcated monolingual and bilingual schooling tracks–in which one choice offered "not enough English" and the other "English only." Carmen positioned her mother, like many bilingual parents, weighing up the two languages and prioritizing the long-term interests of her child to gain "enough English for [her] to learn." Although Carmen viewed her elementary experience as linguistically and culturally subtractive, her articulated commitment to help students like herself "learn in both languages" (see above) indicates that it motivated her trajectory toward bilingual paraprofessional work and bilingual endorsement coursework. It seemed that, by the time she began the Bilingual Methods course that was the focus of this study, Carmen was already committed to disrupting cycles of linguicism.

Similarly, Ema began the course with an asset-based translanguaging stance, demonstrated in baseline writing samples. She discussed, for example, making visible students' cultures by having a sharing time for background stories. Importantly, Ema used language flexibly and strategically within the same assignment, as she analyzed in English her funds of knowledge for teaching (Moll et al., 1992), and reflected in Spanish on her teacher identity (we provide the original Spanish without translation, followed by analysis in English, to further our goal of translanguaging):

> Para mi es muy importante poder implementar mi propio conocimiento en mi salón de clase. Entiendo que es extremadamente necesario entender y saber la historia de cada uno de nuestros futuros pequeños. Para mi será un honor enseñarles todo lo que yo sé desde mi punto de vista y de otras personas para ayudar a mis futuros estudiantes como ser respetuosos, curiosos y que sigan alimentando esas ganas de aprender. Yo seguiré enseñando todo lo que yo ya aprendí, porque algún día ellos podrán implementarlo en sus vidas y saber qué hacer. (Assignment, beginning of course)

In her reflection, Ema wrote of her future students with great respect, describing it as an honor to teach them. She cited three sources of knowledge in this task: her own knowledge, the personal histories of each of her students, and others' points of view within the class. Ema described her teaching as helping students, with an emphasis not on knowledge transmission but rather encouraging a thirst for learning. Within this translanguaging stance, Ema transcended language and classroom learning to articulate a broader commitment to student ways of knowing, identities, and futures. This is the core of expansive translanguaging pedagogy that considers not only the individual student and classroom, but ultimately positions translanguaging as an act of social justice (García et al., 2017).

As with Carmen, Ema traced her motivation to work in bilingual education to her negative experiences as a bilingual student. In a mid-course assignment on language program models, Ema described eight years of transitional ESL, standardized English assessments, and teachers ignorant of bilingual language development, using phrases such as "experiencias negativas," "dificil," "no ha sido la mejor," and "estres y confusion." Conveying the attitude of her past teachers, she commented, "El saber otro idioma que no fuera Inglés era visto como falta de intelecto." The phrase "falta de intelecto" highlights the deficit perspective Ema endured from her teachers, who seemed to confuse language proficiency with cognitive ability, a not uncommon assumption about minoritized bilingual learners, with potentially devastating consequences for their

academic trajectories (e.g., Alim et al., 2016; Flores & Rosa, 2015). Ema then made a direct connection between these lived experiences and her desire to teach bilingual students: "Mi experiencia como estudiante bilingüe es la razón por la cual elegí esta carrera. Yo me he propuesto ser la versión de maestra que me gustaría haber tenido como apoyo cuando comencé mis estudios." This quote demonstrates how Ema interpreted her schooling experiences as negative, in the sense that she was denied a supportive teacher, and set out on her own path to fill this gap for future students. Moreover, Ema envisioned her bilingual teaching as advocacy–namely defending student learning–in addition to constructivist, collaborative knowledge generation. We observed that both focal TCs generated a discourse of language equity early in the course, in light of their asset-based translanguaging stance.

With this stance already in place, the focal TCs were more than prepared to engage with the pedagogical innovation designed for the course, and we can consider TC background experience and asset-based translanguaging stance as enhancing factors in the success of the innovation. Indeed, focal TCs who were engaged in the pedagogical innovation (that is, who were consistently prompted with opportunities to affirm their bilingualism) utilized language more flexibly and strategically than bilingual TCs in past iterations of the same course where translanguaging was encouraged but not prompted or modeled.

This first pedagogical assertion from our design-based research study (Gravemeijer & Cobb, 2006) leads us to the second finding generated by our analysis of focal TC work. We observed that the pedagogical innovation lacked differentiated pathways for bilingual TCs who, in light of their lived experiences, already viewed translanguaging as a primary and valued way of engaging in their studies and in the world. Indeed, for Ema and Carmen, two-thirds of the innovation (and thus course) did not necessarily directly advance their knowledge of the bilingual teaching methods they sought to complement their identities and stances. Ema and Carmen demonstrated a readiness to move beyond the first steps of the innovation focusing on *ourselves* and *our students*, to hone *our teaching* (España & Herrera, 2020). For example, Carmen highlighted her focus on expanding her teaching toolkit with recent and research-based bilingual methods in an early course assignment, where she wrote, "In my experience, as bilingual students we prepare ourselves as models to use Spanish or other language(s), but we also need quality instruction and resources to excel academically to acquire a new language." Unfortunately, our analysis revealed missed opportunities in the innovation design to leverage existing TC professional knowledge through, for example, collaborating to translanguage in content-area literacy instruction (e.g., García et al., 2017).

Taken together, these findings suggest that even within a language equity-driven curriculum, instructors prompting and modeling translanguaging is in

fact a minimum pedagogical move, sufficiently signaling openness to translanguaging so that TCs who are already thinking and languaging and preparing to teach in these ways, feel that their bilingualism has a place in the teacher education classroom and specifically in academic writing. Analysis of focal TCs' writing indicates that while Ema and Carmen fully engaged in the first two steps of the pedagogical innovation (focusing on *ourselves* and *our students;* España & Herrera, 2020) these steps did not necessarily present new information or ways of thinking to them, but rather affirmed asset-based ways they were already thinking about themselves and their future bilingual students. If we consider the study context, it may not appear surprising that bilingual TCs, enrolled in a bilingual methods course, taught by bilingual faculty, at a Hispanic-Serving Institution would be professionally prepared to use language flexibly and strategically in a culturally and linguistically responsive pedagogical framework; to consider this a "success" is reflective of the minimal culture of language inclusion imbuing English-only teaching education, including in Latinx- and bilingual-serving institutions. The innovation, which aimed to normalize and model translanguaging, did not in fact adequately differentiate supports in order to meet these TCs at their current level of professional knowledge.

Ultimately, Ema and Carmen did gain knowledge of bilingual methods and succeeded in the course by implementing bilingual teaching strategies with a focal bilingual student at their teaching site. In her case study assignment, Ema wrote about creating a "positive and culturally responsive classroom" where "[students] feel welcome and safe" and "confident with what they say and do" (Assignment, end of course). Carmen specified strategies she tried and found successful, and would use in her future classroom: "To continue to honor their practices and culture, I would continue to allow translanguaging during Spanish/English instruction so that students can use their linguistic resources to understand content and context of the lesson" (Assignment, end of course). In the work of these focal TCs, we see the confluence of enhancing factors in TC stance, quality bilingual instruction, and translanguaging resources. However, we argue that the more powerful of these three factors was the TCs' own translanguaging stance, which essentially propelled learning forward in the innovation to the third step of examining bilingual methods in practice (*our teaching*).

Discussion

This research contributes to translanguaging scholarship, teacher education, and DBR methods from a language equity perspective. Current translanguaging scholarship tends to emphasize oral language use within the K-12 context but focuses less on postsecondary students or written discourse (Bernstein, 2020;

Canagarajah & Gao, 2019; Hamman-Ortiz, 2020). Teacher education scholarship puts little emphasis on the dynamic of bilingual faculty preparing bilingual teacher candidates to teach emergent bilingual students, and the connection of translanguaging pedagogies to educational frameworks such as Universal Design for Learning has only recently been explored (Cioè-Peña, 2021). Our study contributes to these emerging areas of scholarship by offering a model for how teacher education programs can leverage translanguaging with bilingual teacher candidates in broadly inclusive learning environments to advance language equity. In our research design, we additionally elevate DBR methods by applying them in concert with decolonizing methodologies in order to foreground emic perspectives (Calderón et al., 2012; Delgado Bernal, 1998). This choice affords our faculty-research partnership a depth of intentionality, and accountability, in implementing a culturally and linguistically responsive pedagogy while taking stock of our positionalities.

The pedagogical assertions we are able to make as a result of this study are limited by the innovation design, which contained embedded assumptions about TCs' stance toward translanguaging in teaching. In light of limited opportunities to translanguage in higher education (Canagarajah, 2011), we designed an innovation authorizing and justifying translanguaging in the classroom, rather than taking TCs' bilingual practices and perspectives as a starting point. This design underestimated the robust translanguaging stance in fact held by many candidates, including our focal TCs, and as a result missed opportunities to support further growth in translanguaging pedagogical knowledge. We believe that teacher educators, including ourselves, often worry about monolingual candidates' ability to access translanguaging pedagogy, due to their own language limitations. Instead, we recommend a flexible growth-oriented pathway through course content that centers bilingual students, emphasizes pedagogical knowledge building, and scaffolds monolingual candidates' connections to their own language experiences. While we feel that all three parts of our innovation framework are useful and necessary (*ourselves, our students, our teaching*), flexible learning pathways will allow instructors to modulate the amount of time spent on each aspect, with differentiation for TCs at different points in developing a translanguaging stance, rather than dividing the course roughly into thirds, as was done in this iteration. Continuing to advocate for translanguaging models across teacher education coursework and institution-wide must position bilingual TCs as key partners in this work for language equity, as teacher education should center their lived experiences and translanguaging stance, while dismantling the systemic linguicism of subtractive schooling.

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EXPLORING THE ROLE OF CULTURAL NAVIGATOR TO FACILITATE CRITICAL LITERACY DISCUSSION WITH PRE-SERVICE TEACHERS

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Abstract

Classrooms are becoming increasingly diverse and are filled with students with cultural experiences, values, beliefs, and struggles which may differ from their teacher. As a result, there is an increasing need for teachers to connect, empathize, and understand their students in deeper and in more socially and culturally competent ways. This study investigates the reflections of 30 pre-service teachers in a reading course who engaged in Critical Literacy literature circles and the role of Cultural Navigator where they read and discussed the cultural issues embedded in multicultural books designed for upper elementary students. As pre-service teachers constructed new understandings and shared their own familiar and unfamiliar cultural stories, they developed empathy, and a greater awareness of social issues. Although they gained an increased level of empathy during their interactions with each other and the characters in the books they read, their written reflections did not yet show a sense of agency in advocating for social justice within their community or global society.

Keywords: Literature circles, culturally relevant teaching, critical literacy, cultural navigator, pre-service teachers

Introduction

A lot of the time, there were new things that I taught my members because just like Jude, I am also a Muslim girl. …These were moments in which we connected on a deeper level because I was able to teach them about my culture, religion, and experiences through discussing the story.
– Cultural Navigator

As the diversity of student populations expands in schools, pre-service teachers must raise their understanding of multiculturalism (İşler & Dedeoğlu, 2019) and implications for teaching in a globalized society. Reading multicultural literature and participating in pre-service teacher discussion groups facilitated by the structure of literature circles (Daniels, 2002) provides pre-service teachers opportunities to learn the pedagogy of Critical thinking necessary for developing an understanding of people and places that may differ from their own. Reading and discussing multicultural literature in teacher preparation courses offers pre-service teachers a practical experience to explore their awareness of the histories and social issues of multi-cultures as well as their responses to the experiences of characters in the multicultural literature read in their undergraduate literacy methods courses. This research focuses on the role of *Cultural Navigator,* designed to facilitate literature circle discussion from a Critical stance. The quote above is an example of the power and influence of having an authentic voice in Critical Literacy literature circles.

The authors of this text believe universities play an important role in equipping pre-service teachers with the tools and instructional strategies needed to create classrooms that encourage children to position themselves as active learners, teachers, and change agents. According to Muhammad (2020), literacy learners need experiences in literacy pedagogy that allows them to explore various facets of self-identity and to learn about cultural identities that differ from their own. This type of experience is closely associated with Critical Literacy (Freire, 1970). The purpose of this study was to explore how our pre-service teachers in an undergraduate reading methods course used the role of *Cultural Navigator* to discuss multicultural literature from a Critical Literacy perspective.

In this article, we present the findings of a qualitative study that explored how pre-service teachers explored using the role of *Cultural Navigator* to engage in Critical Literacy conversations about social and cultural issues embedded in multicultural books. Because we found in previous research that Critical Literacy conversations did not exist inherently with the pre-service teachers (Morton, et al., 2022), Morton developed the *Cultural Navigator* role to facilitate culturally

relevant content into conversation about multicultural children's literature. These Critical Literacy conversations took place in the context of a literature circle (Daniels 2002). Typically, literature circles invite students to discuss literary aspects of the text such as the plot, character, and theme. However, in this study, we asked our pre-service teachers to use literature circles to construct a deeper understanding of different cultures and the various social issues that affect those cultures.

Literature Review
Critical Literacy and Multicultural Literature Circles

Critical Literacy pedagogy and curriculum involves learning to read and "write *the word* as well as support students' learning to read and write *their worlds*" (Michell, 2006, p. 41). Critical Literacy allows students to engage with text actively and reflectively in order to increase their knowledge of power, inequality and injustice in human relationships (Coffey, 2022). Additionally, Critical Literacy acknowledges that literate practices are not neutral, rather literate practices are engaged in by humans who are inherently far from neutral (Williams, 2022).

Literature circles can be used to facilitate Critical Literacy in the classroom. At its core, this strategy encourages meaningful interactions with peers around literature. It promotes "conscious engagement" allowing students to naturally adopt a "critical stance" (Lewison, Leland, Harste, 2014, p. 13). This Critical stance enables students to successfully read multicultural literature which often contains diverse views, sensitive social issues, and unfamiliar traditions and perspectives. Furthermore, multicultural literature typically represents groups of individuals who have been marginalized or historically underrepresented (Snow, Piper & Pittman, 2018).

Critical Literacy and Pre-service Teachers

A Critical Literacy stance maintains that teachers must equip students with basic literacy skills while simultaneously helping them develop Critical Literacy processes (White, 2009). It has been observed that many pre-service teachers have had limited Critical Literacy instruction in their K-12 or college experiences. Rather, most of their learning has emphasized decoding and comprehension. Nevertheless, Critical Literacy is not a process that can fully be taught, rather it must be experienced, providing pre-service teachers with engaging opportunities to explore diverse cultural and social perspectives (Patterson, 2009). To ensure that beginning teachers are prepared to implement Critical Literacy in

their classrooms, more and more teacher education preparation programs are incorporating Critical Literacy activities within students' coursework.

Davis and Bush (2021) used literature circles with their pre-service teachers as they read and discussed social justice issues embedded in multicultural literature. They found that most of their students believed that the experience gave them greater insight into issues such as race, gender, language, and social class in America. Additionally, Vaughn, Allen, Kologi, and McGowan, observed the engagement of rural pre-service teachers in literature circles which highlighted race, culture, and social class (2015). Their findings confirmed pre-service teachers' ability to move beyond simply summarizing text during literature circles. Furthermore, it revealed students' ability to relate these critical topics to their own lives and begin to confront more controversial issues. İşler and Dedeoğlu (2019) investigated the literature circle responses of pre-service classroom teachers who read multicultural books that centered on historical and current social issues. These participants showed evidence of gaining an understanding of different perspectives and of developing the skills needed to take action to eliminate social injustice. However, the participants did not express opinions of more sensitive global issues and did not refer to their own cultural experiences in relation to the text. Further, these researchers concluded that participants often had difficulty recognizing ways to reduce instances of prejudice, stereotyping, and racism. Previous studies reveal the continued need for pre-service teachers to have spaces where they can learn to critically engage around controversial or unfamiliar topics in a supportive environment. This research also reveals the need for further research on specific ways to scaffold students' ability to deeply discuss culturally sensitive topics in relation to their own lived cultural experiences.

Our Initial Investigations: Multicultural Text and Literature Circles

This study draws from our previous work with multicultural literature (Morton et al., 2022) which found that pre-service teachers neglected to read text from a Critical Literacy stance during the multicultural literature circle. Rather, we observed that they read the text from a traditional critical stance, adopting higher order thinking processes that enabled them to make inferences and draw conclusions. They did not engage in true *criticality*; reading and writing in ways that increased their understanding of social issues and social constructions such as privilege, oppression, marginalization, and social justice. Muhammad (2020) draws a distinction between the two forms of critical engagement. She designates *critical engagement* where students think deeply about a topic with a lower-case "c". In contrast, she designates *Critical engagement* where students examine

sensitive societal issues and diverse cultural topics with a capital "C". Therefore, we decided to include an explicit focus on Critical Literacy when preparing our undergraduate students to participate in the multicultural literature circle assignment in future classes.

Foundational Ideologies, Theories, and Practices of the Cultural Navigator Role

To expand our pre-service teachers' awareness of culture and its impact on the characters and events in multicultural literature, we introduced a new literature discussion role (*Cultural Navigator*) as a tool to facilitate literature discussion from a Critical stance. Morton designed this role based on Sociocultural theory and principles of literacy pedagogy, including Rosenblatt's (1995) Reader Response theory of making meaning from text through aesthetic and efferent responses to literature, Vygotsky's (1978) concept of mediating learning through a Zone of Proximal Development and shared understandings between mentors and students, and Daniel's (2002) literature circle strategy designed to guide student discussion about literature and reinforce reading comprehension. Unlike the roles of Discussion Director, Illustrator, and Word Finder (Daniels, 2002) in which the responses are "right there" or located in the text (Tompkins, 2017), the *Cultural Navigator* role situates the reader's response in a place to share the expertise of their culture, whether it was family experiences, recognizable foods, and drinks, or even given names or labels of products (Mohammad, 2020; Rosenblatt 1995).

A desire to foster intercultural understanding was also foundational to Morton's creative inspiration of the *Cultural Navigator* role. First, the benefits of reading multicultural literature (Bishop, 1990) using transactional reader response (Cai, 2008) and in schools is well documented in the literature. Based on Bishop's (1990) view that reading multicultural literature is transformative in its capacity to inform and influence readers' perspectives about themselves and others when encountering people's stories and cultures that may be both similar and different from their own, this ideology and the tenets of cultural competence were considered when designing the unique role of *Cultural Navigator*. Cultural competence is a set of behaviors, attitudes, and policies that influence an organization or group. While diverse organizations have their ideas on cultural competency, Cross et al. (1989) purports that they all must have five essential characteristics in order to be effective:

1. Valuing diversity
2. Having the capacity for cultural self-assessment
3. Being conscious of the dynamics inherent when cultures interact

4. Having institutionalized culture knowledge
5. Having developed adaptations to service delivery reflecting an understanding of cultural diversity.

Finally, Freire's (1970) Critical Literacy pedagogy provides more evidence and support that the *Cultural Navigator* role can be used to facilitate deeper discussion and critical reflection about the social issues readers might encounter in the multicultural literature they would read. Because literature circles are organized around roles that participants fulfill on a rotating basis during each discussion meeting, the role of a *Cultural Navigator* is meant to be responsible for bringing insight and information about the cultures represented in the literature to foster an understanding about cultural themes that may challenge members of the literature circle. Figure 1 illustrates the ideologies, theories, and practices Morton considered fundamental to developing the *Cultural Navigator* role designed to highlight perspectives from diverse populations identified in multicultural books.
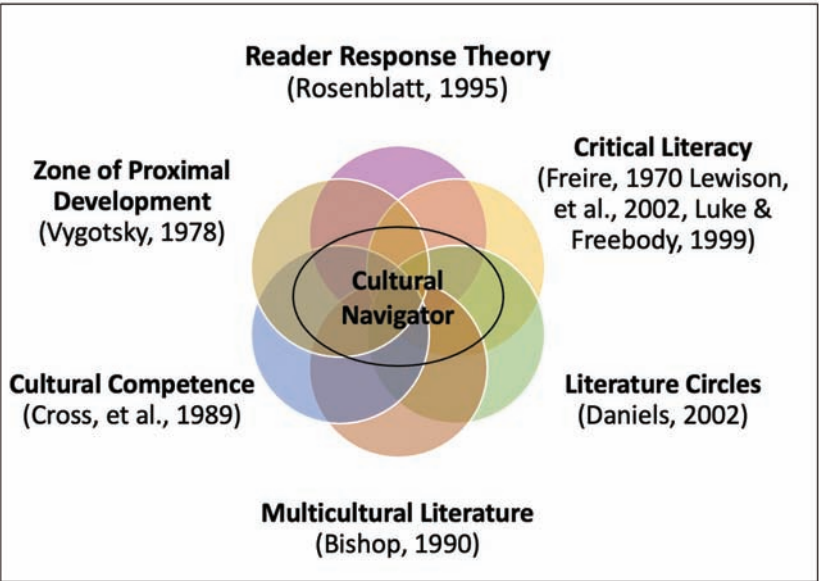
Figure 1. Foundational Ideologies, Theories, and Practices of the Cultural Navigator Role

Research Questions

We wanted to continue exploring the Critical Literacy practices of our pre-service teachers using literature circles; this time with particular attention to how the *Cultural Navigator* role impacted their discussion and reflections in the Fall semester of 2021. This study was guided by two research questions:

1. How do pre-service teachers participating in multicultural literature circles engage in Critical Literacy practices?

2. How do pre-service teachers use the *Cultural Navigator* role to support their participation in multicultural literature circles using a Critical Literacy lens?

Methodology

To explore how our students used the *Cultural Navigator* role from a Critical Literacy perspective, we used Lewison, Flint, and Van Sluys's (2002) Four Dimensions of Critical Literacy to teach students the difference between reading critically to enhance comprehension and reading Critically to promote social justice. We also used these Four Dimensions to frame our analysis of the data we collected. This section describes the rationale and description of the Critical Literacy literature circle assignment, the participants of the study, and our analysis of artifacts we collected.

Examining Four Dimensions of the Critical Literacy Framework

Having reviewed 30 years of research and descriptions of Critical Literacy in the literature proposed by literacy educators, theorists, and linguists, Lewison, Flint, and Sluys (2002) developed a framework to synthesize its complexity and make it more comprehensible and actionable for practitioners for i.e., classroom teachers and students. Drawing from Luke and Freebody's (1997 four resource model, Shannon's (1995) Critical Literacy framework, and Janks's (2002) synthesis model, their model includes Four Dimensions: disrupting the commonplace, interrogating multiple viewpoints, focusing on sociopolitical issues, and taking action to promote social justice.

Lewison et al. (2002) initially used these Four Dimensions to analyze how newcomer teachers and novice teachers implemented Critical Literacy practices in their Critical Literacy project. This framework has been used in other studies

TABLE 1
Dimensions of Critical Literacy

Critical Literacy Dimension	Description
Disrupting the commonplace	*Viewing the everyday through novel lenses*
Interrogating multiple viewpoints	*Understanding experience and text from individual perspectives and from the viewpoints of others*
Focusing on the sociopolitical	*Going beyond the personal and attempting to understand the impact and influence of existing sociopolitical systems*
Taking action to promote social justice	*Using literacy to achieve social justice by engaging in praxis reflection and actions that transform or enhance everyday life in light of privilege and injustice*

to describe the Critical Literacy learning experiences facilitated by educators across grade levels and in higher education (Hayik, 2016; Lewison, et al, 2002). Our research shows that we (Loewenstein et al., 2021; Morton, et al., 2022) began to include concepts related to the Critical Literacy framework during our initial investigations of how pre-service teachers used digital versions of multicultural books instead of print versions. In this present study, we draw from the findings of our prior research to expand our thinking about our pre-service teachers' experience using literature circles as it relates to sociocultural issues from the perspectives of the Lewison et al.'s (2002) Four Dimensions of Critical Literacy. We hoped our pre-service teachers would adopt a Critical stance (Lewison, et al. 2015) by consciously engaging in alternate ways of thinking, taking responsibility to inquire, and being reflective.

Examining Text and Reader Response Theories

Literature circles pedagogy is supported by Rosenblatt's (1995) reader response theory and Vygotsky's (1978) zone of proximal development concept, which emphasize the importance of sharing literature in a safe environment where readers are encouraged to express their unique opinions (Hsu, 2004; İşler & Dedeoğlu, 2019) about the texts they read together. With respect to multicultural literature, Klassen (1993) stated that, "literature circles were a place to explore the value and usefulness of diverse perspectives for the purpose of expanding one's own orientation toward multiculturalism (p. 138). Tompkins (2017) notes that students are often motivated to share their ideas about the literature they read together because they are allowed to self-organize around the critical components of a

literature circle including "choice, literature, and response" (p. 346). Researchers (Jocius & Shealy, 2017; Morton et al., 2022) show that opportunities to respond allow readers to draw upon their prior knowledge, experiences, perceptions, and emotions and provide them with a space to learn from their peers as well as to empathize with their peers' unique experiences and insights.

Critical Literacy Literature Circles Assignment and Participants

Engaging pre-service teachers in literature circles to explore multicultural children's literature has been a standard assignment for many years in a Reading and Literacy I methods course for K-6 pre-service teachers in our elementary education reading program at our midsize university in rural northeast Texas. In 2020, we added a Critical Literacy dimension to the literature circle assignment to introduce new ways of thinking about social issues using upper elementary and middle grade level texts that feature social issues across diverse cultures. Students were given a choice of books from the list in Table 2 to read and discuss using literature circle jobs, such as Discussion Director, Passage Picker, Artful Artist, Summarizer, and Connector.

TABLE 2
Multicultural Book List

Book Title and Author	Culture Represented
The Breadwinner by Deborah Ellis	Afghan
Front Desk by Kelly Yang	Chinese
Out of My Mind by Sharon Draper	Disability
Other Words for Home by Jasmine Warga	Muslim
Towers Falling by Jewel Parker Rhodes	African American, Muslim
Refugee by Alan Gratz	Jewish, Cuban, Syrian

Prior to 2020, we had only used Morton's *Cultural Navigator* role to facilitate discussion through a cultural lens without specific instruction related to Critical Literacy. Then in 2021, we incorporated explicit instruction based on Lewison, Flint, and Van Sluy's (2002) Four Dimensions of Critical Literacy to guide our students to read and discuss these texts from a Critical Literacy perspective. These Four Dimensions include: 1) disrupting the commonplace, 2) interrogating multiple viewpoints, 3) focusing on sociopolitical issues, and 4) taking action to promote social justice.

Participants

In the Fall semester of 2021, thirty participants who were primarily junior year students in their elementary education program met in one of three sections of a face-to-face class twice a week. It took four to six weeks to complete this literature circle assignment presented mid-way through the semester. Commentary from the assignment reflections indicate that only a few participants were familiar with the concept of reading and discussing literature in a literature circle format, stating that they had previously experienced this reading practice in high school. Others had heard of literature circles but hadn't ever participated in one. None of the participants had read the children's literature presented in this course, nor were they familiar with the concept of Critical Literacy according to Freire's pedagogy (1970), nor the Four Dimensions of Critical Literacy we presented.

Students met with their literature circle groups of three to four students a minimum of three times to complete this project in three parts designed to engage students in reading, analysis and discussion about the literature, individual reflection, and a group advocacy presentation. After deciding how to divide their selected text into three sections, they discussed ideas about the book according to the appointed literature circle role they prepared in advance of their meeting. Following each meeting participants wrote reflections about the group's discussion, guided by five writing prompts:

1. Discuss how your designated task (role) helped you to understand the story.
2. Discuss the critical question/responses that you and/or your members discussed that may have caused you to think more deeply about the story.
3. Discuss what you learned about yourself as a literacy learner.
4. Discuss what you learned about yourself as a *Cultural Navigator*.
5. Discuss how this portion of the story challenged you, confirmed an existing idea, changed, or expanded your thinking/perception, and/or helped you to better understand someone or someone who is different from you.

At the conclusion of the assignment, participants wrote individual reflections about the book, their Critical stance about the social issues in the book, and how they might use this literature circle experience in their future classroom. The following prompts guided their reflections:

1. What book did you read? Explain the plot and theme(s)/social issue(s) of the book.

2. Explain what you liked about the book and what you didn't like about this book. Was the book what you expected? Why or Why Not?

3. Discuss the ways in which taking a Critical stance helped you to better understand and connect with the book and your group members. Discuss any challenges, surprises, or paradigm shifts that you may have had as you engaged in conversations during the literature circle.

4. Discuss how you might use this text in your classroom or how you wouldn't use it in your classroom. Be sure to explain WHY. Could this book be used in creating Critical Literacy learning experiences? Why or why not?

5. Discuss what you learned from participating in the literature circle experience?

6. Based on your experiences using this instructional strategy, explain how you might use literature circles in your own classroom, working with children in Pre-K-6 or middle school.

Participants were also asked to create a group multimodal presentation advocating for social justice relative to a hot topic they identified during their Critical Literacy literature circle discussion.

Artifacts and Analysis

We used Lewison, Leland & Harste's (2008) definition of critical literacy to frame our data analysis. They state that:

> Critical Literacy practices encourage students to use language to question the everyday world, to interrogate the relationship between language and power, to analyze popular culture and media, to understand how power relationships are socially constructed, and to consider action that can be taken to promote social justice (p. 3).

We collected four artifacts for each participant, including three literature discussion reflections, a summary reflection, and 13 multimodal group presentations. Using qualitative data analysis, we identified patterns in two stages of coding (Saldaña, 2016). In the first cycle we themed the data to identify categories of

behaviors and general observations in the written artifacts by highlighting and writing comments in a column alongside each document. We identified five broad themes across the data: naming social issues, making connections, communicating empathy, providing opinion, and expressing hope.

Then, because we did not initially observe signs of Critical Literacy thinking in the participants' responses, we used theoretical coding to explore how the role of *Cultural Navigator* may have influenced participant discussion and reflection in the second cycle of coding. Using the four *a priori* themes from the Lewison, Flint, and Van Sluy's (2002) Four Dimensions of Critical Literacy, we coded participants' reflections and wrote analytical memos documenting ways they 1) disrupted the commonplace, 2) interrogated multiple viewpoints, 3) focused on sociopolitical issues, and 4) took action to promote social justice. We recorded this analysis in a sortable spreadsheet including quotes that exemplified each dimension, analytical memos, and the associated book title, so that we might analyze the data from different perspectives.

Findings

Students overwhelmingly agreed that discussing difficult subjects using the literature circle jobs was beneficial to their understanding about the text and sociopolitical issues. They liked rotating jobs because it offered new ways to explore the literature more deeply and to appreciate group members' different perspectives about social issues based on a common reading experience. They embraced the idea of being a *Cultural Navigator* broadly and in ways that fit their own unique ways to make meaning from the text. In the absence of someone present during their discussions to help them navigate the nuances of the culture represented in the text, they used the *Cultural Navigator* role to make sense of challenging topics by making text to self and text to world connections (Keene & Zimmermann, 1997). In this section we present our analysis of student reflections according to the Four Critical Literacy Dimensions. Because Critical Literacy practices sometimes overlapped across dimensions and appeared across the books and reflections, we grouped examples of Critical Literacy practices by book titles, identifying where these ideas stood out the most in the literature, student reflections and in each dimension.

Dimension 1: Disrupting the Commonplace

Students used language and other sign systems to identify various ways to identify, perceive, and acknowledge or consider new frames of reference from which to better understand an idea or experience (Lewison et al., 2002).

Critical Literacy Practices:

- Students began to really "see" the challenges, and struggles of marginalized groups, such as refugees and women who are having to comply with political systems or cultural norms.

- Students acknowledged how the authors portrayed experiences in ways that made them feel as if they were the characters in the stories.

- Students were able to think in novel ways because of the opportunity afforded by literature circle roles (and particularly the *Cultural Navigator* role) in which they had to construct and co-construct new or different ideas with their peers.

- Students became more aware of the uniqueness of their own lives in relation to their peers and the characters in the book.

Disrupting the Commonplace in Other Words for Home

The novel, *Other Words for Home* (Warga, 2021) elicited several reflections that include making connections with Jude, the protagonist, by comparing her culture to the reader's American culture and the struggle of being a Muslim woman in Syria. For example, in the absence of having an authentic cultural representative from Syria, the reader attempted to be a *Cultural Navigator* by making connections related to being discriminated against and feeling different in society. She stated that, "As Culture Navigator we as a group saw how Jude and her mother were discriminated [against] and we can see how that can still relate to today's world." Then she made a personal connection, "I as a child moved to a city where the school and the city were not diverse. I at times felt out of place and different than everyone else, just as Jude."

Students explained how visualizing during reading helped them see themselves in the book they were reading. "My designated role really helped me visualize what the story looks like. It had a way to show me what it maybe would have looked like if it were put in the actual book itself."

In response to the question about ideas that challenge the reader in the same novel, one student stated that the conflict depicted in the story felt real:

> This story challenged me because it had a very real way of how you read the story and feel how the people in the story felt. It was surreal to think about all the things that the family went through as a family, and how they all had different ideas of thinking about their country and what they liked and was OK to do.

She also compared her American freedoms to Jude's, life in Syria:

> I think that it helps me get a better perspective on how things are here in the United States and how things are different in their country. I was able to better understand and appreciate my life that I have here because I don't have to worry how things are going to turn out as far as my land and freedom.

Disrupting the Commonplace in Refugee

Students disrupted the commonplace by making connections using the literature circle roles. In the historical novel, *Refugee* (Gratz, 2017), one participant made connections with the emotional challenges characters faced using two literature circle jobs, the Artful Artist and *Cultural Navigator*. She made visual connections with the character's emotions by drawing the setting of the book (see Figure 2) and reflected that, drawing and visualizing "helped me focus not only on the words itself, but the setting in which the book *Refugee* takes place. It made me tune into the characters' mindsets and allowed me to see how their surroundings affect their emotions."
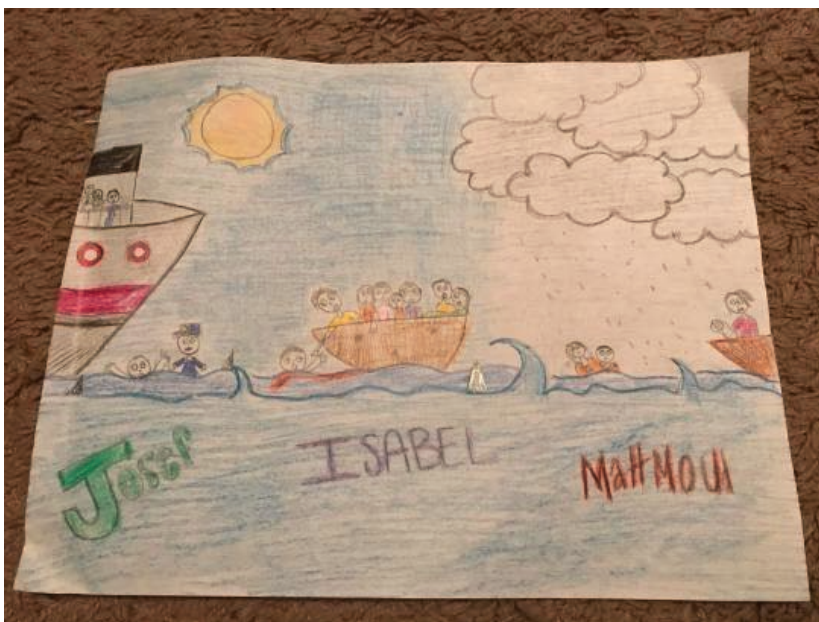
Figure 2 Drawing Facilitating Visual Connections During Literature Circle Discussion

She also made connections between the emotional challenges the charac-
ters faced in their stories and people today.

> As a cultural navigator I came to the realization that although these
> characters are fictional, their stories are very similar to people we
> may know today. There are so many people from other countries
> who take journeys like Josef, Isabel, and Mohamud's from another
> country to find freedom in America. That's something that has
> definitely expanded my thinking/perception. That stories like
> theirs are still happening in today's time. We just don't know it's
> happening.

Disrupting the Commonplace in The Breadwinner

A group that read *The Breadwinner* (Ellis, 2000), recognized that what is
common to one may be different or strange to another. One reader contrasted
marriage customs in the United States and Afghanistan, stating that "To us it
may not seem normal, but to their culture it is mostly common for arranged
marriage to happen." Another group member compared problems in the United
States with those in Afghanistan.

> As a culture navigator I have learned that life in the U.S is better
> than over there. This helped me realize what the Taliban people were
> doing in Afghanistan and that they are cruel to the people in my
> opinion. It is an ugly world over there and makes me realize that we
> have our faults here in the U.S., but that we have it so good in the
> country we live in today.

Her role as Artful Artist helped her think about ideas she considered cruel (see
Figure 3).

Dimension 2: Interrogating Multiple Viewpoints

Students demonstrated the practice of interrogating multiple viewpoints by
experiencing the vulnerability of standing in the "shoes of others" in order to bet-
ter understand unfamiliar experiences (Lewison, Flint, Sluys, 2002). Specifically,
this literacy experience puts them in positions to understand an experience, an
idea, or situation by concurrently contemplating their own perspectives as well
as considering the viewpoints of others in their group.
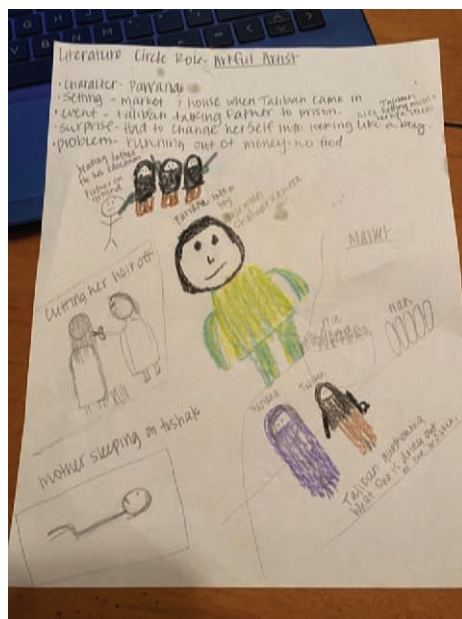
Figure 3 Student Drawing Depicting Examples of Cruelty Discussed in Literature Circle Meeting

Critical Literacy Practices

- Students took risk in sharing their opinions and stayed open to the opinions of others.

- Students were more aware of their similarities and differences during their discussions.

- Students acknowledged that their knowledge of social and historical events increased and recognized how their own unique experiences and frames of reference caused them to interpret story events differently.

- Some students recognized that some stories, because they are fiction, could have had different endings and/or counternarratives.

- Students were able to think in different ways because of the opportunity afforded by the literature circle jobs to construct new or different ideas with their peers.

Interrogating Multiple Viewpoints in The Breadwinner

In *The Breadwinner* (Ellis, 2000), one student tried to imagine the life of an 11-year-old girl, Parvana, who risked her life to support her family in

unfathomable ways. She stated that "I would not know what to do if I were in the same shoes as her, she is braver than I will ever be."

In the third round of literature discussion, a Discussion Director posed Critical questions related to women's gender roles in Afghanistan, as a way to understand what they considered to be a double standard in Parvana's society:

> Why was Parvana pushed to become the sole provider, while Nooria was married off? This was something we talked about mainly because it felt like a double standard within the same gender. This caused me and the rest of our group to think deeper about double standards within our gender and that there are in fact many double standards.

They also grappled with this difficult question by trying to make connections between gender roles in both Parvana's and their own lives:

> As a literacy learner I learned to connect to my life within a story even if I cannot directly relate to Parvana. As a cultural navigator, we further explored the double standards within their society. This expanded my perception on gender roles not only between men and women, but within the same gender identities as a woman as well as freedom differences between Afghanistan and the United States.

When discussing how Parvana's sister Nooria and their mother were going to meet the man and family that Nooria was going to marry, they discussed differences and similarities about gender and marriage in their cultures, as well as what they consider to be blessings about their own culture. A student reflected that "It made me think how here in the United States we do not have arranged marriages. We are able to choose who we want to be with." Grappling with the idea of arranged marriages offered this group a counternarrative to their own experiences with marriage:

The extent to which Parvana was willing to go to earn money to support her family caused this group to reconsider how fortunate they are, despite their own personal challenges. They realized their experiences in the U.S. can't be compared to those of Parvana and her family.

> We also take many things that we have for granted. …. and don't sometimes realize that we think we have a difficult life but there is much worse out there. We think we are struggling but we aren't selling our leg for money or selling any little thing we have to have

money for bread and tea, or our parents aren't having to be silent about the fact that they have an education. I have learned that I am thankful for my life and more appreciative of the freedom and things that I have.

Interrogating Multiple Viewpoints in Refugee

The historical novel, *Refugee* (Gratz, 2017), naturally lent itself to exploring questions about history and provided readers with opportunities to discuss connections between historical and current events. One student responds:

The part of *Refugee* that I have read so far has confirmed what I have known about the places these children come from. With Syria most recently being in the news; the awareness brought about Cuba with the death of their communist leader, Fidel Castro, and of course the history we have all heard regarding the Holocaust in Germany, however; the depths people go to, risking their lives to escape, is eye-opening.

The stories of the immigrants seeking refuge in foreign countries also facilitated reflection about a controversial topic of immigration in America. As one student shares:

I have always agreed with the thought of America being a melting pot of cultures and know it would not be America without that. I welcome with open arms; people from all cultures and countries and especially people that leave their country to seek asylum for a better life for their families. I would never want to live a day in their shoes; yet, they would die for a day in mine.

One group tried to "walk in the shoes" of the children enduring unmentionable hardship to seek asylum with their families by discussing one of their Critical questions: "How are they able to be strong when all three of them are around the age of twelve?" These stories challenged their own perceptions about resilience. A student reflected on her own experiences when she was 12 years old, as were some of the children in *Refugee*:

It is amazing, yet scary, how strong the three children are, even for being so young. I know that when I was twelve, I was just having

fun, not trying to hide my hurt, pain, and show how scared I really was. By reading *Refugee*, I was able to really understand struggles that went on in other parts of the world. It reminds me and brings me back down to realize how fortunate I truly am. This book showed me that even though we all walk the same Earth, it does not mean that we're all taking the same path and that each story is different although we may all have similarities in life.

Connecting historical knowledge to the stories of refugee children caused one student to consider immigration in a new way. "I remember hearing and learning about these events in school but have never heard about it from a child's perspective. This story makes me realize how fortunate I truly am even though I have faced similarities like being homeless with my mom and brother."

Another participant made connections between history and current events. She recognized differences between sociopolitical systems and issues between another culture and her own, while also making connections to historical events:

As a cultural navigator, I was able to connect what historical events had happened in each character's story … I think this portion of the story really opened my eyes to just how recent some of these terrible things have happened. For example, In Mohamed's story which takes place in 2011, I didn't know that it was only a few years ago that things like this were happening and probably still are today. It really opened my eyes to how corrupt the world has become and can be.

Interrogating Multiple Viewpoints in Front Desk

In *Front Desk* (Yang, 2019)**,** students have an opportunity to embrace new ideas about diversity, poverty, and prejudice from the perspective of a 10-year-old child living in her family-run motel. Despite distinct differences between Mia's world and most young children today, one reader reflected that "Children are very similar no matter what culture they come from." Making connections between Mia and her own experiences, she wrote that, "When Mia didn't listen to her mother's instruction to not touch a key, it made me think of the times I didn't listen to my parents and times that my students haven't listened to me, and they got hurt." Fulfilling her *Cultural Navigator* role facilitated new ideas about other cultures. She explains, "being a cultural navigator has helped me realize we need to see the similarities in other cultures, rather than looking at their differences. We need to embrace other cultures and be willing to learn from them."

Dimension 3: Focusing on the Sociopolitical Issues

Students engaged in questioning that acknowledges the realities of living in and being influenced by sociopolitical systems (Lewison et al., 2002). Students showed some evidence of going beyond their personal milieu and psychological lives to consider the impact and influence of social and political issues as they relate to the characters in the book, society, and their future students.

Critical Literacy Practices

- Some students alluded to and discussed social issues such as racism, bigotry, immigration, and poverty as unique and systemic social problems.

- Students made connections to current worldly events, such as the immigrant crisis in Haiti and persecution in Syria.

- Participants were concerned about how to appropriately discuss sensitive social topics with children.

Focusing on the Sociopolitical Issues in Refugee

In *Refugee* (Gratz, 2017) one literature circle group discussed the connection between the Holocaust and the more current Syrian diaspora. In her reflection, a student alluded to the importance of learning about diverse cultures who have been polarized in history as the "other" (Said, 1978).

> Although most people agree that the Holocaust was a world-wide tragedy and agree that it was the best move for Jews to leave Nazi Germany to seek refuge elsewhere, not everyone has the same ideas about present-day Syrians. I think it's interesting that the only real difference between Josef and Mohammad is time. Perhaps future generations will bemoan us for not assisting Syrian refugees like Mohammad and his family even though they are essentially escaping a warring country, just like Josef during the Holocaust. Books like this which highlight the perspectives of people who are often viewed as 'other' are integral to understanding humanity as a whole.

Another reader from the group seemed surprised to realize that history repeats itself. "I didn't know that it was only a few years ago that things like this were happening and probably still are today. It really opened my eyes to how corrupt the world is and can be."

The tragic experiences the characters in *Refugee* experienced inspired emotional responses and caused one reader to reflect on current events taking place while she was reading the book:

> This story confirmed existing ideas I'd previously been thinking, and I think it's why the book made me so emotional. I've always had a soft spot for Immigrants/Refugees. The week I started listening to this book was the same week the Refugees from Haiti were at the Texas Border being pushed away by border patrol. All I could do was think of the children there telling their story right along with the children in the book and it broke my heart that this is a battle people just continue to face year after year.

Some pre-service teachers shared their concerns about using *Refugee* with younger students. One participant stated that the story is "just too sad … for my future second grade students". Another reflected, "I think certain parts of this book may be too graphic or sensitive … for some kids."

Focusing on the Sociopolitical Issues in *The Breadwinner*

Another teacher planning to teach Kindergarten - third grade found *The Breadwinner* (Ellis, 2000), provocative and rich with cultural lessons. Yet, she would be reluctant to use it with younger children as well, stating that she doesn't "see it being age appropriate for those grade levels". She would use the book with sixth graders, despite the fact that the book was written for 10- to 12-year-old students.

Focusing on the Sociopolitical Issues in *Towers Falling*

In *Towers Falling* (Rhodes, 2016), students had a similar discussion about the impact of the fatal attack on U.S soil during 911. One reader wrote about her role as a Passage Picker:

> My role as the passage picker helped me understand that even all these years later, the impact of the towers falling is still burdensome on everyone alive during that time and even more so to those directly impacted in New York. … Reading the story makes me think about how far that catastrophic event stretches through the entire world.

Student reflections reveal that some of the literature circle group members were not old enough to have observed events of 911 on TV when they occurred; yet, they "actively listened to their stories" of group members "recall that day of 911".

Those who were old enough to have been part of 911 in any capacity were *Cultural Navigators* for the younger readers in the group.

Thinking as a *Cultural Navigator* in another reflection, a student made connections between the prejudice Muslims and African Americans encounter based on racial profiling:

> As a cultural navigator, I've learned that some people will be always labeled sadly no matter what their character may have to offer. For example, when the book mentions how Muslims are more targeted as African Americans. It's especially so sad when Sabeen's parents have to warn her about what's to come. This reminds me of when I've had the 'race talk' with my mom about me being careful in the world.

Dimension 4: Taking Action to Promote Social Justice

In this dimension students should be using different forms of reflective thinking, language, or other sign systems to achieve social justice. This dimension requires students to use their new knowledge or to transform their understandings to engage in actions that influence, or directly impact everyday life, social, cultural and/or political systems (Lewison, Flint, Sluys, 2002). While the students within the study engaged in reflective practices, and shared goals for future implementation of Critical Literacy practices in their own classrooms, our study does not show evidence of students acting as agents of change or influence within or outside of their immediate environment.

Reflections stopped short of taking action. Instead, many students mentioned outrage and concern about the injustice they read about. One student suggested becoming more intentional about seeking social justice in a reflection about immigration. She wrote that, **"**I will be intentionally looking for ways that I can become involved in my community … to help close the gap for immigrants feeling less than accepted in reference to *Front Desk* (Wang, 2019).

Taking Action to Promote Social Justice in Out of My Mind

In *Out of My Mind* (Draper, 2012), one student who is a teacher's aide in a special education classroom recognized how students with disabilities are often stereotyped by people who do not know them. She wrote, "I work with children with disabilities, and I see them be treated differently by others that are not around them all the time like I am." In this situation this pre-service teacher recognizes a common problem many disabled children experience. She problematizes the fact that disabled students may be judged by their disability. She empathized,

"It makes me very sad when this happens. Disabilities do not define who you are". She recognizes a social problem but does not mention how to change the way disabled students are perceived in society.

Another teacher's aide expressed how she is encouraged to communicate more effectively with her special education students. She aims "to think about the future and what my students are thinking." She contemplates the frustrations non-verbal children may feel when connecting her experience working with non-verbal students to Melody in *Out of my Mind*. In this example, taking action is seen as changing one's own practice rather than changing the world:

> I work with many students who are nonverbal, and I have also wondered what it would be like to not be able to communicate with someone. When my students are throwing temper tantrums like Melody, is it because I couldn't understand what exactly they were wanting or needing. I want to personally challenge myself to work harder to find ways for my students to communicate with me so I can help them even more.

Taking Action to Promote Social Justice in Refugee

Students viewed themselves as future teachers in their reflections. They tended to transfer opinions about social injustice they discussed in *Refugee* (Gratz, 2017) into generalized statements about education rather than stating specific ways to promote justice:

> We are all human beings. Each of us at the end of the day want to live life and be protected. To know there are people out there who don't get protection because of their beliefs or what they look like astounds me. It is our job as future educators to completely reduce those things.

Taking Action to Promote Social Justice in Front Desk

Another student isolated her attention on the issue of racial profiling in *Front Desk* (Wang, 2019). She does not explain how to resolve the issue; rather, she explains that she is still learning about it:

> This portion of the book has challenged me to look at racial profiling, not just say that I am acknowledging it. Instead of saying that doesn't happen anymore or turning away from the injustice that is happening every day, I am choosing to do my research and think about

ways that I can get involved to help people not feel the way that the nonwhite characters feel in this book.

Discussion

Qualitative analysis reveals four major findings. Students overwhelmingly agreed that the discussion element of literature circles was beneficial. They liked rotating jobs because it offered new ways to explore the literature more deeply and to appreciate group members' different perspectives about social issues based on a common reading experience. They embraced the concept of a *Cultural Navigator* broadly and in ways that fit their own unique ways to make meaning from the text. In the absence of someone present during their discussions to help them navigate the nuances of the culture represented in the text, they used the *Cultural Navigator* role to make sense of challenging topics by making text to self and text to world connections (Keene & Zimmermann, 1997). Students expressed different levels of empathy, including cognitive, emotional, and compassion for the characters in the stories they encountered. Although they recognized important social issues and felt empathic; they did not take an advocacy stance for social change. Yet, they eagerly expressed ways they could modify Critical Literacy literature circles across the elementary grades in their future classrooms.

We found that the pre-service teachers were most comfortable discussing the literature from the perspectives of the first two dimensions: discussing the commonplace and interrogating multiple viewpoints. Students began to really "see" the challenges, and struggles of marginalized groups, such as refugees and women constrained by political systems and/or cultural customs. They acknowledged that their knowledge of social and historical events increased and recognized how their own unique experiences and frames of references caused them to interpret story events differently. Some students recognized that some stories, because they were fiction, could have had different endings, alluding to the potential for counternarratives. Students were able to think in different ways because of the opportunity that they had to construct new or different ideas with their peers. Ultimately, students became more aware of the uniqueness of their own lives in relation to their peers and the characters in the book.

In our analysis, we conclude that these participants are beginning to understand what it means to take action against perceived notions of injustice. Although they acknowledged being challenged by issues of social injustice, articulating ways to resolve sociopolitical problems was less evident. The nature of multicultural literature prompted them to focus on sociopolitical issues; however, their reflections stopped short of articulating specific ways to combat the injustice.

Thus, we wondered if taking a Critical stance requires taking action to promote social justice, or if recognizing issues of social justice, and reacting to them with emotion and empathy is enough to fully support taking a Critical stance.

The four dimensions used in our analysis was simply a framework to recognize what teachers were thinking and where they were in their journeys toward developing a Critical Literacy stance. Although we wonder if text connections and empathy are enough when reading the world (Freire, 1970) from a Critical Literacy perspective, we also recognize that it isn't uncommon to move in and out of the different dimensions of Critical Literacy thinking. In their work with newcomers and novices to Critical Literacy, Lewison et al. (2002) acknowledged that "the dimensions provided a framework for examining teacher beliefs and practices to distinguish the varied ways in which teachers contextualized and enacted critical literacy" (p. 391). In this course, we wanted to introduce our pre-service teachers to the possibilities of reading literature from a Critical Literacy perspective and to provide them with tools to facilitate Critical thinking when reading challenging texts. We recognize that enacting change in any circumstance takes time, and resolving social injustices that are deeply embedded in society, such as issues of poverty, immigration, race, and gender may require a deeper dive into the history and context behind the stories of the characters and places our participants encountered in the literature they read. Under any circumstance, change requires time, commitment, and curiosity at the least. We hoped that the role of *Cultural Navigator* would launch the curiosity needed to imagine a better future.

Significance of the Study

It is vital for teacher preparation programs to respond to the increasing cultural diversity of society and in our changing school demographics (İşler & Dedeoğlu, 2019; Larkin, 1995). Critical Literacy literature circles that feature multicultural literature prepare teachers to grapple with challenging topics by confronting their own perspectives and then to practice Critical Literacy pedagogy in their classrooms. This study contributes to that body of literature by revealing a new literature circle role that facilitates a way for classroom teachers to include multiple perspectives and cultural nuances in a structured and safe learning environment. This role is called the *Cultural Navigator*, and our analysis in this study reveals additional layers of Critical Literacy engagement. The *Cultural Navigator* role facilitated deeper personal reflection of pre-service teachers' identity, as well as opened pre-service teachers' eyes to the social injustices prevalent to society today. This research demonstrates new ways for teachers (novice and experienced) to

enhance Critical Literacy literature discussion by expanding the role of personal reflection and calling attention to social inequities in society with the aim of developing a capacity for social action.

Conclusion

Including the new literature circle role (*Cultural Navigator)* added a multifaceted advantage to pre-service teachers' evidence of Critical engagement. The *Cultural Navigator* role was not simply provided as a tool to share a new cultural perspective, as it also facilitated Critical thinking processes related to sociocultural and sociopolitical issues. While assuming the perspective of a culture expert, a *Cultural Navigator* as an "outsider" is not always believed to be authentic (Mikkelsen, 1998). It is a reality that must be considered in classrooms that are not diverse. Nevertheless, the *Cultural Navigator* role can happen in a positive and purposeful manner. Students must acknowledge that he or she is from another race or ethnicity than the main character in a multicultural book and show understanding that their own culture may influence their responses in this role. Pre-service teachers who assumed this role in this study not only informed their peers of cultural nuances evident in literature, but they were also able to make connections from the cultural perspective focused on sociocultural issues. In addition, the literature discussions that took place with the influence of the *Cultural Navigators* marked initial levels of becoming Critical in their discussions.

When Harvey Daniels (2003) introduced the literature circle roles, he was clear that the role sheets will only be used until the literature circle members became more confident with their dialogue and could engage in their own self-generated conversations after being immersed in literature. The inclusion of multicultural literature, and the new *Cultural Navigator* role have projected Critical thinking into the process of producing Critical thinkers. We know that reading literature that sometimes focuses on sociocultural issues invites readers to struggle with challenging issues that may not have easy answers. Thus, inquiry and intentional action become necessary to help readers move beyond the simply identifying, connecting, and empathizing challenging social issues.

We understand that developing a Critical Literacy mindset takes time, practice, and must be facilitated through focused activities and supports that focus on teaching HOW to think from a Critical stance; including, how to question, examine, and analyze language, unspoken/unseen ideas, and power relationships, for example. It's a mindset aimed at understanding and then taking action to imagine solutions to problematic social inequities. Critical Literacy is action oriented. Participants embraced the literature discussion and used the

Cultural Navigator role to open their minds toward social advocacy; yet they needed more time in this project to fully understand the mindset of the Four Dimensions of this Critical Literacy framework and imagine solutions to the problems they discussed in their discussion circles.

Critical thinkers are established when readers disrupt the commonplace with their ideas, interrogate multiple viewpoints before making decisions, and focus on sociopolitical issues, leading them to take action, and participate in social action. This framework enables pre-service teachers to develop new perspectives for taking a Critical stance in their discourse, by developing their cultural competency, and the capacity to advocate for social justice in their schools and communities. To draw from Bishop's (1990) metaphor comparing multicultural literature to mirrors, windows, and sliding glass doors, the role of a *Cultural Navigator* in literature discussion facilitates a reader's movement through the sliding glass doors of culture simply by contemplating informed ideas and possibly new perspectives about people and places different from their own. It's a beginning step toward developing Critical readers, thinkers, and social advocates.

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REPRESENTATIONS OF MARGINALIZED IDENTITIES IN GRAPHIC NOVELS

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Abstract

Graphic novels are a way for students to access information both in text and visually to allow for a greater understanding. Within these texts, characters represent a number of identities and should be viewed critically for how those identities are portrayed. Representation of race, immigration status, gender, disability, and LGBTQ+ identity are shown across graphic novels as they continue to become more popular and move toward representing the demographics of society more accurately. The included articles show how various identities are represented in graphic novels used in classrooms for young adults. The graphic novels included allow for varying groups of people and the stories from their specific point of view to be told in new and more accessible ways.

Keywords: graphic novel, marginalized identity, race, gender, disability, LGBTQ+

Introduction

There are countless types of reading materials available for students in the classroom. As time has progressed, the availability of materials such as graphic novels has increased. Graphic novels provide students a visual and textual story to help students understand what they are reading. Within these, representation is important not only in the text but also in the visual component. Students can actually see the characters they are reading about and if that character is in any way like them, see themselves in the narrative of the story.

The curriculum students receive in school not only teaches them content, but through what is shown it gives them the message of how much their identity

is valued in the society in which they are a part of (Marshall, 2021). Marshall (2021) also shows how while students are given information from history, they are often given incomplete information at the expense of people of marginalized identities. Everyone deserves to have a story they can identify with told, not only for themselves, but also for the others to see them as well. If the texts students receive in schools only frame one story, then students will think only one story or one version of a story is valid. These stories should be well rounded and thoughtful for how different groups are represented. People of all groups should not just appear in the media, but they should have their complexity represented (Botelho, 2021).

Marginalized identities can be identified within a community as having disempowerment, a lack of resources, and those whose identities may be excluded from prosocial sources of support within their community (Ferrer-Wreder et al., 2002). This lack of support or disempowerment leaves those with these identities' lives more challenging including challenging their sense of self. In the case of this review, these identities that have been identified include: race, disability statues, immigration status, gender, and LGBTQ+ identity. These identities are typically left to the wayside in literature used in schools to make room for white, male, able-bodied, cisheteronormative characters. Research has shown that textbooks students use include more male characters than female characters (Ullah et al, 2014). This inclusion of male over female characters is true in both print and images and in true across different countries that the books originate from. The availability of books that include stories with narratives based upon Latinx immigration stories helps allow students to see stories of themselves, their families, or their classmates; however, there are missing aspects to that narrative that are critical to a full understanding of these experiences (Rodriguez & Braden, 2018). Students with disabilities are often divided from their peers without disabilities in social settings, which creates discomfort for those peers without disabilities. However, including stories in the classroom that include stories that portray characters with disabilities that include positive stories, humor, and do not use pity for the character with a disability will allow all students to feel comfortable and welcome in the classroom and help bridge the gap between groups of students (Rieger & McGrail, 2015).

Graphic Novels

Graphic novels are a form of print media that blends both written text and graphic representations of the story being told. Lawn (2012) posits that graphic novels are the coming together of literature and animation to create this style,

rather than just the next step from comics or a picture book. This type of reading material is on the rise, with the demand for graphic novels rising year after year (Griffith, 2010). As a teaching tool, graphic novels allow teachers and students to work on their visual literacy skills using the images in the graphic novel (Watts, 2015). This visual literacy is used for students to infer changes between images as well as notice recurring visuals and examining what they can see as well as read. Graphic novels are also valuable for teaching social justice to provide a visual into identities and experiences they may not have encountered before (Watts, 2015). On top of the exposure to new stories, graphic novels allow students who might have difficulties with reading or dislike reading to access texts (Lawn, 2012). In education, graphic novels can be considered a multimodal text, which includes more than just words to help the reader engage with multiple literacies in reading (Lawn, 2012). Graphic novels as a reading material allows for more access to the information as well as allowing students to understand what is on the page more clearly than with just words.

Rationale

This review examines the existing literature on graphic novels and how different marginalized identities are represented within them. Initially, four main categories were identified: race, gender, disability, and LGBTQ+. However, research was found that discussed immigration status/English Language Learners, so that was also included for discussion. The purpose of this study is to provide a systematic review of research on current graphic novels in regard to the representation of identities outside of the white, US-born, male, non-disabled, cis-heteronormative norm portrayed in many stories and answer the following questions:

- What research literature exists for students of varying identities?
- Are there any intersectional examples for students of more than one identity?

Based upon previous research, this study will synthesize the existing research that focuses on graphic novels and representation of varying identities. Upon reviewing the existing research, the review will then consider what is missing from the literature and what next steps for researchers and educators in classrooms and libraries can do next to increase the upward trend of graphic novels that represent all students appearing in schools and in the hands of the students that need them the most.

Theoretical Framework

When identifying the types of graphic novels available to students in a variety of identity categories, it is important to examine how these identities are portrayed in the larger community. Weisner (2002) describes an approach to understanding the effects of the larger community on children as ecological-cultural (ecocultural). While not a direct impact of community on child, how the overall community portrays a given identity falls within the institutional forces that Weisner poses are at play in a community. These forces then have an impact on the growth and development of the child. For the purposes of this review, while the effect on particular children is unknown, it is important to examine how the larger community views identity to in turn shape how to best provide resources that support our students in the classroom. In viewing these articles through an ecocultural lens to understand the possible effects of including these works in classrooms for students, Tonyan et al. (2013) employs the ecocultural lens on educators and how they impact their students. The selection of these graphic novels to allow students to feel seen and be better understood would fall on the school and the teachers and fall within Tonyan et al.'s (2013) idea of the culture of the school affecting the students within.

Methodology

Data Collection

Data for this research were collected using a variety of databases through the George Mason University library. Databases that were used include ERIC and Education Database. In order to find the studies that were used for this research, initial searches for articles and studies, the general search terms included "graphic novels," "literature," and "adolescents." The searches that yielded results that led to the specific research were "graphic novels," and "representation." From these searches the topic was narrowed to look at various identities. Specific searches included: "race," "immigration", "disability," "gender," and "LGBTQ." These specific terms were chosen due to race, disability, and gender being public demographic data available for schools. Conversely, LGBTQ+ identities are the most challenged demographics for inclusion in educational materials.

Criteria for Inclusion/Exclusion

Studies that were included for this research covered a time span from 2009 to 2021. These studies were included because of how recent they were with information

about graphic novels. Articles also needed to fit into one of five categories to be included in this review: race, immigration status, gender, disability, or LGBTQ+. Articles were not included if they did not contain information specifically regarding graphic novels or pertaining to one of the five previously mentioned categories. Articles published before 2009 were not included, due to literature falling into other criteria of exclusion and no older literature being available. A total of eight articles met the criteria for inclusion.

Findings

Overall, the included articles identified current (at the time of publication) graphic novels that are available for a variety of demographics. These articles identify the importance of the demographic they are focused on and then highlight a variety of current graphic novels that feature that demographic. This review follows the textual narrative synthesis methodology (Xiao & Watson, 2017). The information from each included article is included in a narrative manner after being grouped into homogenous subgroups by demographic category. A quantitative count of articles by subgroup is also included. Following the narrative inclusion of each article, an overall synthesis is included for similarities and differences between included works.

FIGURE 1
Total Number of Works Examined by Category in Articles

Category	Article	Number of Works Examined
Race	Moeller and Becnel (2018)	57
Immigration Status	Boatright (2010)	3
	Becnel and Moeller (2021)	6
Gender	Hurwich (2020)	3
Disability	Irwin and Moeller (2010)	30
	Moeller and Irwin (2012)	29
LGBTQ+	Kedley and Spiering (2017)	2
	Wan and Shin (2016)	1

Race

Moeller and Becnel (2018) examined how race is depicted in graphic novels created for teens. The study first poses the background that the racial diversity in children's books do not represent the actual diversity found in society. These findings are not novel and calls for diverse books have been made for many years. The purpose of this study was to see how many and in what capacity people of color are represented in graphic novels and the races of the authors and illustrators of the graphic novel that contain this representation. The study used the 2015 edition of the "Great Graphic Novels for Teens" booklist from the Young Adult Library Services Association. Graphic novels from the list that were excluded were books that fell under the category of manga and books where characters were solely animals or were so fantastical, race could not be determined. Of the original list of 79 fiction and non-fiction titles, 57 remained for the purpose of the study.

Moeller and Becnel (2018) read each of the included novels three times, focusing on various aspects of the text to understand how the novels depicted race. To determine the race of the characters, the authors used text and visual evidence to determine race. The United States Census Bureau's (USCB) racial categories were used to classify the races that they were determining, though with one change, the USCB lists Hispanic/Latino to be an ethnicity, but the authors followed the Cooperative Children's Book Center and used Latino as a category. Once the character's race was determined, the characters were then categorized by their role in the story: main, supporting, or background character. The authors and illustrators were then determined through online search of the specific person and determined by text and visual clues using USCB terminology again.

The study found that of the 57 included books 76 percent, (43 books) contained character who were people of color. Fifteen books (27 percent) had characters of color who were the main character, with the highest percentage being characters identified as Asian. The next two categories, supporting and background saw the majority of people of color included in the graphic novels with 36 books (64 percent) and 39 books (70 percent) respectively. Of the 57 novels included, only 12 (21 percent) had a person of color as either author or illustrator.

The study poses that the graphic novels show this genre to be more representative of people of color and that the inclusion of more racially diverse people in the background of stories is more indicative of the truly diverse world around readers. However, while the representation of characters is growing, the researchers note that the authors of these stories are still predominantly white, and of the 21 percent of people of color in this category, 75 percent were identified as Asian.

The researchers show the need for stories about people of color to be written by people of color, but also pose that authors who are not can still write these stories, as long as they are doing their research and allow for critique. The researchers also note the limitations of this study as one list of 57 included graphic novels and wonder if the findings would be similar if all graphic novels published that year or on the other yearly Great Graphic Novels for Teens lists.

Immigration Status

Boatright (2010) examined how graphic novels can be used to bring immigration stories into the classroom. This research focuses on three specific graphic novels that were chosen because of the inclusion criteria, which included: 1) the text must be an explicit immigrant experience narrative and 2) the graphic novel was published within ten years of this research being completed. Boatright uses a critical literacy framework, which he poses cannot be singularly defined, but asks a reader to move past pure comprehension and find the ideology that is carried by the text or image. The researcher also uses work to help guide the understanding of immigrant experiences.

The first work Boatright delves into is *The Arrival*, which is then summarized for the reader. Boatright further shows how the author and illustrator have centered the immigrants in the story in both whiteness and the notion of the ideal immigrant who follows all of the laws and customs, to create the archetype of the American Dream. The second work Boatright examines is *The Four Immigrants Manga: A Japanese Experience in San Francisco, 1904 – 1924,* which is an autobiographical work by the author. This work being different from the last in that it portrays the immigrants in the story in a style to allow the reader to identify more with the characters as they experience the perils of the times that immigrants faced. In examining the deeper meaning in the work, Boatright makes note of the art style that westernizes the main character's features to distance them from other Asian Americans but also shows them experiencing racism and xenophobia so that they cannot fully assimilate in the culture they have immigrated to.

The final work that Boatright examined is *American Born Chinese*, which deals with a character who is a second-generation, American-born character. The graphic novel not only centers skin color of the characters as a major point of the plot, but the author also uses other characters who are grounded in full stereotypes to examine the ideas of identity and conflict with the culture around them. Boatright then poses how the texts he examines can be used in the classroom to discuss the immigrant representations. Not only does he want students to examine the experiences, but also the historical context of events from different points of view than their own.

Becnel and Moeller (2021) examine more recent graphic novels available to students that focus on the immigrant experience. The first text they mention, in which they hope to build upon is *The Arrival*. They pose that this work has been included in classrooms across the country and is the winner of many awards, but there are more recent texts that can provide the first-generation immigrant perspective. Becnel and Moeller (2021) chose novels that using a border peda-gogy approach that recognizes not only political borders, but borders of culture and society, which take the characters in the novels across many of the types of borders that people can face, and allow the reader to explore and reflect on these physical and socially constructed borders.

This article selects six graphic novels to highlight for inclusion in the classroom. These also span a variety of backgrounds from Russia, Guatemala, Somalia, Brazil, and an undetermined war-torn country. The works included in this article include: *When Stars Are Scattered, Manuelito: A Graphic Novel, Darkroom: A Memoir in Black and White, Azzi in Between, Anya's Ghost,* and *Be Prepared.* The works range in publishing from 2011 to 2020 with the most recent, *When Starts Are Scattered* not only centered on the immigrant voice, but also presented a major geopolitical issue at the time, the voice of a refugee as he faces a new country and the rules set forth by the United Nations. Becnel and Moeller (2021) conclude that including these graphic novels as well as others that discuss these types of stories, educators can counter the immigrant stories seen in the media that are often negative. Including these stories also allows students to observe the story but also discuss and understand the power dynamics that are faced by people as they immigrate to new nations.

Gender

Hurwich (2020) examines how gender is perceived by adolescents in graphic novel adaptations of religious stories. The study centers itself on Modern Orthodox Judaism, a more liberal branch of traditional Judaism. Within Modern Orthodox Judaism, Hurwich (2020) poses that educators within the faith teach a patri-archal understanding of women's roles that uphold a traditional gender norm. Hurwich's main goal is to understand how opinions are formed about gender in the graphic novels that are presented to readers and focuses on the epistemologies and literacies used by the readers of the graphic novel adaptations of traditional Jewish texts. The study included three adaptations of traditional Jewish texts: *The Book of Genesis Illustrated*, *Megillat Esther*, and *The Illustrated Pirkei Avot.* These adaptations included unabridged text from the original religious text. The researcher goes on to discuss the intent behind the three adaptations, with one

seeming to stick closely to the text rather than with a more common interpretation, one includes both Hebrew and English, as well as interpretations of what is happening, as well as political commentary on the American leadership, and the final is designed to engage the reader and make the teachings relevant. The texts were read by 15 adolescent females who are Modern Orthodox Jewish (MOJ) and attend one of three MOJ schools in the New York City area. They all are familiar with the stories presented in the adaptations, but not the adaptations themselves. Their backgrounds vary from attending co-educational or single gender schools, having synagogues with varying opportunities for women, as well as varying identities as graphic novel readers or not. Hurwich (2020) had the participants read and engage with the texts and discuss how they felt about varying aspects of the graphic novel. Once the transcripts were coded, the author divided the comments into five categories: 1) Non-Jewish references, 2) Jewish references, 3) Text, 4) Image, and 5) Women. She found 2,991 lines of dialogue, of which 1,289 were comments on varying aspects of the graphic novels. The comments were grouped again into comments on image, text, Jewish references, and non-Jewish references and broken down into percentages of comments made: 62.37% for images, 32.97% for text, 11.71% for Jewish references, and 8.68% for Non-Jewish references. The study showed that the graphic novel adaptations allow for autonomous analysis, which is also helped by allowing readers to converse with peers. The students who were participating in the study also noted the subjectiveness of the adaptations, how in relation to the adaptation, there may be bias and a different understanding from the artist to the reader and choices they make are up for their own interpretation depending on who is reading them.

Disability

Irwin and Moeller (2010) examine how disability is portrayed in graphic novels that are created for teens. First introducing us to the importance of including people with disabilities in the media that students are exposed to. Their next important point centered on how disability has been portrayed in media and the ten major stereotypes that are attributed to people with disabilities. Some examples of these stereotypes include: pitiable and pathetic, object of violence, laughable, burden, or nonsexual. There are other stereotypes included in the list and the point is raised that identifying these stereotypes will help bring awareness to these depictions. The research was completed by using the Great Graphic Novels for Teens 2008 list from the Young Adult Library Services Association. From this list, thirty graphic novels were included in a random sampling from the sixty on the list. The graphic novels are read three times by the researchers, to

read different aspects of the medium: first text, then visual, then text and visual together. Out of the thirty graphic novels that were selected for this study, twelve contained a character with a disability, with the following disabilities represented in order of prevalence: other health impairment, visual impairment, orthopedic impairment, emotional disturbance, and specific learning disability. The researchers determined that many of the characters that were found in the stories also fell in the negative stereotypes they discussed earlier in the study. Many of the characters with disabilities were seen as pitiable or their own worst enemy rather than inclusive members of their community. Irwin and Moeller (2010) acknowledge that graphic representations of disabilities outside of a physical disability are hard to include, since many disabilities are hidden. This study also discussed the differences in portrayals of males and females with disabilities, showing that often female characters were depicted as pitiable over their male counterparts. Finally, the study concludes with acknowledgement that there is not enough representation out there, but the sample size was also small and potentially biased based on the list that was chosen.

Moeller and Irwin (2012) revisited their 2010 research to examine if there were any changes from their first study. In this case, the researchers use the New York Times Graphic Books Best Seller List from March 2009. This list included twenty-nine graphic novels. As in their initial study, the graphic novels were read three times: text, visuals, and text and visuals together. In the case of determining whether a character had a disability, it was important to note that the researchers did not determine on their own but relied on the book to show or tell them the disability existed. Of the included graphic novels in the sample group, eighteen of the twenty-nine included characters with a disability. The disabilities portrayed in this group include, in order of prevalence: orthopedic impairments, other health impairments, emotional disturbance, traumatic brain injury, visual impairment, multiple disabilities, hearing impairment, and speech impairment. There was a total of forty-four characters in the sample that had a disability, with a prevalence of male characters. A difference from their first study, the largest group of a particular stereotype was atmosphere. This study also included many more of the stereotypes listed in the article that depictions of disability typically fall into. The researchers note that although this study found much more representation of disability than the first, much like the first the representations are mostly negative stereotypes.

LGBTQ+

Kedley and Spiering (2017) discuss a series of myths about gender and sexuality and how graphic novels with accurate representations of both can be used

to dispel these myths. The researchers pose that graphic novels specifically are unique to helping depict LGBTQ experiences. Within the centering of the article in queer studies, the definition of sex and gender are discussed. Kedley and Spiering also discuss the gender binary and how that it is a society structure that is accepted by many people without question. In defining key terms, the term compulsory heterosexuality is described as the idea that heterosexuality is the natural default. The article focuses on two specific graphic novels as examples of representation and how they can be used in the classroom. These graphic novels are: *Adrian and the Tree of Secrets* and *Honor Girl.* These two were chosen for their content and how they can be used to discuss gender and sexuality. The article focuses on three myths to dispel using graphic novels with LGBTQ+ representation: 1) gender and sexuality are naturally connected, 2) gender and sexual identities are permanent and fixed, and 3) the heterotrajectory is assumed and normal. In this article, heterotrajectory is defined as the path of life based on a heteronormative ideal. Kedley and Spiering (2017) pose at the end that texts with LGBTQ+ characters should be included in classrooms, but also teachers should give the opportunities for their classes to discuss queer topics and have conversations about gender and sexuality. Specifically, graphic novels allow for beginning conversations and extending them through the use of text and pictures. Having text and illustrations that center LGBTQ+ characters allow the discussion to center on how they are represented.

Wan and Shin (2016) examine a non-traditional graphic novel, and online graphic novel known as a webtoon. The webtoons discussed are all LGBTQ+ themed and show representation that can help change perceptions of queer individuals. What separates webtoons from standard graphic novels is the format that allows for zooming and scrolling rather than a static picture on the screen. Webtoons have been used to bring awareness to various social issues. Wan and Shin note that stories featuring transgender stories are missing in Young Adult literature. This article focuses specifically on one webtoon: *Room 305* with LGBTQ+ themes centered. Wan and Shin (2016) bring their focus to a specific episode of a webtoon, to focus on the story of a student in the story who is transgender and how he explores his gender identity. Webtoons also provide engagement from readers, as readers can comment on the webtoons, which was examined in the research. The comments about the webtoon are further divided into the voices of the insider and the outsider. Insiders are those within the LGBTQ+ community and outsiders are those outside of the community. Insiders had a variety of reactions to the webtoons, but three main categories emerged: 1) gratitude for stories like theirs being represented, 2) validation seeking through the experiences the characters faced, and 3) sharing their experiences that are similar to the stories

within the text. Conversely, the outsiders' comments fell into three different categories: 1) experiencing these types of stories for the first time, 2) reflecting on assumptions, and participating in discussion regarding social, cultural, and political structures and 3) discrimination for LGBTQ+ people (and specifically transgender people). The discussion also included how even within the LGBTQ+ community, there is uneven representation of the different voices that make up the community, with transgender voices receiving the least. The discussion also included those voices that were against the LGBTQ+ community, based on heteronormativity that deems the LGBTQ+ community abnormal. Wan and Shin (2016) pose that these online graphic novel webtoons affirms those within the community and allows the dominant culture a way in to view this community to learn and participate in meaningful discourse.

Discussion

While Moeller and Irwin (2012) were speaking specifically about disability, the sentiment that could be applied to any of the other groups is: students should see themselves realistically in the media that is available to them. There are generalities that can be drawn across the articles about the importance of representation, but due to small sample sizes within them, they fail to come together to make a large implication across the board. Since the articles are all looking at specifically one type of representation, intersectional connections are difficult to make.

The articles from Moeller and Irwin (2012) and Becnel and Moeller (2021) contain strong similarities in the manner in which they systematically identified literature and coded each graphic novel into a variety of sub-demographics within their larger demographic, race or disability (Irwin & Moeller, 2010; Moeller & Irwin, 2012; Moeller & Becnel, 2018). This is most likely due to the shared author, Moeller. This author also appears in another of the included studies (Becnel & Moeller, 2021), showing an interest in the field of graphic novels and representation, but also showing the small pool in which there are not many researchers in this topic area. Through this systematic approach, the authors were able to identify identities on a larger scale than the other included articles in this review. The other articles included in this review were on a much smaller scale and focused on very specific works, graphic novels or webtoons in a graphic novel style. These small-scale articles focus on selected graphic novels that fit within the demographic that is being highlighted by their article (Boatwright, 2010; Wan & Shin, 2016; Kedley & Spiering, 2017; Hurwich, 2020; Becnel & Moeller, 2021).

The reviewed literature shows that graphic novels provide representation of marginalized identities at varying levels of inclusion and levels of positivity and negativity. The graphic novels examined in the articles and studies were all designated for a young adult audience, which centered the discussion on those classrooms and students at the middle and high school levels. The implications of the reviewed articles and studies show that graphic novels can be used to provide meaningful representation of varying identities. The research can be used to show what texts would be good for use in the classroom and how these texts can be centered and used to lead meaningful, critical discussion with students. Many of the reviewed works centered on how the classroom teacher could use these works in their room, but also use them as a starting point to bring in more graphic novels.

Of the questions posed in this review of the literature, one of the two can be clearly answered. The articles provide a very limited view of the literature that exists of the varying identities addressed in this literature review. Included in the articles are very small sample sizes, so generalizations about what literature exists cannot be drawn. Of all of the included articles, none provide an in-depth look at multiple identities of the characters. Only the articles by Irwin and Moeller examine the gender of the characters to draw conclusions of negative stereotypes. The final question can be answered in a way that, what is missing is more research. The sample sizes are small, and the articles are limited in scope, so there are a lot of graphic novels out there to still be analyzed for representation, which would also be a next step.

Limitations

The limitations of this review should first center on the very small scale of research that exists that discusses graphic novels and the identities within them. What research does exist contains a small sample size of texts to determine the true scale and impact of the representation found within graphic novels. The research is also primarily single-faceted and focusing on one aspect of identity of the characters. It should be noted that none of the studies provided a multi-faceted intersectional analysis of more than one identity for the characters in the story. This analysis could provide greater insight on the representation of the whole character rather than just one part of them since people are multi-faceted and could see more than one part of themselves within the characters in the stories. Of the eight included works for this literature review, four included the same researcher, and of those four, two included the same co-researcher, and another two used another co-researcher. This small group of authors also provides a very narrow understanding and viewpoint, which could be expanded upon by the inclusion of research from other researchers.

Recommendations

Based on the research for this research review, the number of graphic novels available for students is growing, and with that the amount of representation of people outside of the white, male, able-bodied, cisgender norm that had been previously centered in graphic novels. With this rise in available literature, practitioners in the classroom and in libraries should be including these texts for their students to access. Greater access to texts that represent the students in the classroom not only allow the students to see themselves as main characters in the story, but also allow others to see them as main characters and not just supporting characters to the previous norm.

Based on the amount of included graphic novels in the included articles, researchers have focused primarily on the representation of characters by race and disability status. Further research should be done in the areas of immigration status, gender, and LGBTQ+ identity. Increasing the research on these other identities will bring more solid backing for teachers to bring "in" these materials. Now that researchers have begun to identify the types of representation available in graphic novels, they could begin diving deeper into this field by comparing the graphic novels found in classrooms and school libraries to demographic data for their schools and see how school districts are including characters of varying identities.

While researchers should be diving deeper into what is available in school districts and comparing that to demographic data, many teachers and librarians are coming face to face with materials being banned from their bookshelves and topics being banned from discussion. Teachers and librarians that are not facing these types of bans, should do everything they can to include materials that include all types of people, and graphic novels are a way to do that with text and visually. Teachers and librarians that are facing bans and material being pulled from the shelves would do best to work with researchers to show the importance of representation in materials for students and use the publicly available demographic data to help show the groups of students that are affected positively by the inclusion of these types of materials.

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READING WITH DADDY: IMPACT OF RURAL FATHERS' JOINT BOOK READING ON EMERGENT LITERACY GROWTH

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Abstract

Decades of research has established joint book reading with caregivers as beneficial to children's emergent literacy growth (Bus et al., 1995; Demir-Lira et al., 2019; NELP 2008; Pelligrini et al., 1990). Yet, most of this research was conducted with mothers. With recent societal changes fathers are taking on more childcare roles. Yet, little literacy research exists to document fathers' contributions. The few studies that examine their influence on the home literacy environment indicate they make distinct and important contributions that complement mothers' input (Fagan et al., 2015; Reynolds, 2019; Salo et al., 2016). This study adds to this body of research by examining the impact on children's emergent literacy behaviors when reading with fathers in rural areas in the Southeastern United States. Findings indicate fathers made positive contributions to children's vocabulary as well as concepts of print and phonological and alphabet knowledge.

Keywords: Joint Book Reading, Shared Reading, Emergent Literacy, Fathers

Introduction

Society often places the responsibility of childcare on women (Fagot et al., 2012). Within the scope of this responsibility is the need to prepare children for success in school by engaging in activities such as joint book reading. However,

recent shifts in gender roles and family structures have led to fathers becoming more involved in childrearing activities (Banchefsky & Park, 2016; Bauman & Wasserman, 2010; Jethwani et al., 2014). Despite their increased participation in daily childcare activities, little research exists to document fathers' influence on children's emergent literacy growth when engaging in joint book reading.

Literature Review

Shared reading has long been established by research as one of the most beneficial practices for building emergent literacy behaviors (Adams, 1990; Clay, 1991; NELP, 2008). In these studies, shared reading is the practice of an adult or older family member sitting with a young child beside them or in their lap to offer a clear view of text and illustrations as they read. However, shared reading can have many meanings within educational research. Holdaway (1979) used the term to describe the practice of primary teachers using big books to teach beginning reading skills. Others "[use] the term *shared reading* more broadly to describe a variety of read-aloud methods and other engagements with books, many of which focused primarily on supporting children's vocabulary and grammatical development . . . or print skills acquisition" (Shickedanz & McGee, 2010, p. 323).

Due to the various meanings of the term shared reading, joint book reading is sometimes used to describe more specifically the interactive process of reading between child and caregiver (Bus et al., 1995). During joint book reading, the caregiver draws the child's attention to the print and illustrations, exposes them to the novel language of books, and elicits responses through questioning (Pillinger & Wood, 2013; Richgels, 2003). These actions promote what Clay (1966) called emergent literacy behaviors.

Studies with mostly mother-child dyads have found joint book reading promotes many emergent literacy behaviors, particularly vocabulary. In a longitudinal study of children from 18-months to age 5, Roberts et al. (2005) found mothers' use of teaching strategies during joint book reading led to increases in their children's receptive vocabulary. Bojczyk and colleagues (2016) observed and coded the quality of reading interactions between mothers and their children in a rural Head Start program. They found a significant positive relationship between high quality reading interactions and children's expressive vocabulary.

Joint book reading with mothers has also been shown to increase other emergent literacy behaviors in addition to vocabulary. In their meta-analysis, Bus et al. (1995) found strong support for the link between joint book reading and vocabulary, phonological awareness, letter knowledge, and comprehension.

Examining dyads of mothers and 3- to 4-year-old children, Bingham (2007) found the quality of mother's joint book reading was positively related to children's development of receptive vocabulary, concepts of print, alphabet knowledge, and emergent reading ability.

Although mother-child dyads are the focus of most early literacy research, a limited number of studies focusing on fathers have been conducted recently. Many of these focus on general developmental factors (e.g., emotional attachment, cognitive ability, and behavior) or linguistic input (Fagan et al., 2015; McWayne et al., 2013). Studies of fathers reading wordless picture books to their children indicate the practice leads to their children's oral language growth (Baker & Vernon-Feagans, 2015; Pancsofar et al., 2010).

Similarly, children's vocabulary increased after participating in joint book reading with fathers. When comparing language input from fathers during play and joint book reading, Salo et al. (2016) found fathers used more diverse vocabulary and asked more questions during book reading. The increased questions led to higher vocabulary scores for their children. One study even indicated fathers' joint book reading had a stronger influence on vocabulary than mothers'. In an of examination of the frequency of both mothers and fathers reading with their children up to age five, Duursma (2014) found paternal reading predicted oral language ability. However, mothers' reading did not have a significant effect on children's language.

As fathers become more involved in childrearing (Banchefsky & Park, 2016; Bauman & Wasserman, 2010) many of them believe they need to be active participants in their children's literacy learning and claim to enjoy engaging in joint book reading (Bingham, 2020). Despite decades of research on the benefits of joint book reading on children's emergent literacy behaviors, few studies have included or focused on fathers. The scant research that does exist claims fathers' involvement, whether alone or in partnership with mothers, is beneficial to children's emergent literacy development, particularly in the area of vocabulary (Baker, 2013; Fagan et al., 2015; Reynolds et al., 2019). Yet, no consensus has yet been reached as to which emergent literacy behaviors fathers have the most influence on and the extent of their contributions compared to mothers (Baker & Vernon-Feagans, 2015; Sims & Coley, 2016). Given the importance of the foundational emergent literacy period, additional research into the contributions of contemporary fathers is warranted. Therefore, this study was conducted to contribute to the burgeoning body of research examining the impact of fathers on their children's emergent literacy development. Such research can benefit families, and the experts who support them, interested in planning home literacy activities to prepare their children for school.

Theoretical Framework

Each society has cultural tools, such as language, that mediate how information is interpreted and understood (DeZutter & Kelly, 2012; Gee, 2001). Children begin learning to be literate in these tools from birth through interactions with others (Clay 1966; Street, 1995). For young children, the majority of these interactions take place with close family members, particularly parents. While some learning occurs implicitly through social interactions, children need instruction to gain others, particularly school-based cultural tools (Rogoff et al., 1993; Vygotsky, 1978; Wood et al., 1976). School-based cultural tools are a specific genre, or routine way of using language known to everyone in the group (Gee, 2001). Many parents seek to prepare their children for school by teaching them the genre of school language through home literacy practices, such as joint book reading.

Regardless of the household, joint book reading mostly follows a set routine. First, the parent and/or child selects a children's book and sits so the book is accessible to both. As the parent reads, they may ask questions and point out features of the text and/or illustrations. This routine is generally repeated hundreds of times over the child's first years of life, teaching how books can be used to convey information and how to access that information. Although both parents can engage children in joint book reading, fathers may have a stronger influence on children's emergent literacy behaviors, particularly vocabulary, than mothers. According to the bridge hypothesis introduced by Gleason in 1975, fathers are more challenging communicative partners for their children than mothers. As primary caregivers, mothers have a deeper understanding of children's language abilities and more shared background knowledge with the child. Due to this familiarity, mothers can adjust their speech to their children's current language ability level. Without such shared understanding, fathers place more demands on the child to clarify their communications. Thus, fathers are a bridge between the language children use at home with mothers and the linguistic abilities needed to communicate with the outside world.

Despite significant changes in family structures and parenting roles in the more than four decades since Gleason's study, more recent research suggests fathers still serve as bridges for their children's language development. Rowe et al. (2004) compared how mothers and fathers talked to their children during play. They found fathers engaged in more questioning and made more requests for clarification than mothers. Likewise, Duursma (2016) found fathers used more talk unrelated to the task and more engagement strategies while reading to their children.

Methodology

To contribute to the body of research on fathers' joint book reading, this study examined rural fathers' impact on emergent literacy behavior using a quantitative pre- and posttest design. A questionnaire and reading logs were also collected to aid in interpreting the results. All data was collected as part of a larger study comparing mothers' and fathers' joint book reading.

Participants

Prior research has shown fathers have a strong influence on their children's language development (Fagan et al., 2015; Salo et al., 2016). Studies with rural fathers, specifically, have indicated fathers' engagement in home literacy activities leads to increases in their children's vocabularies after controlling for the mothers' input (Baker & Vernon-Feagans, 2015; Reynolds et al., 2019). This study also focused on rural families to investigate if fathers would have a similar impact on their children's emergent literacy abilities.

Families from three neighboring rural districts in the Southeastern United States were recruited through the daycare or public school the child attended. Teachers sent home recruitment flyers with children in preschool and kindergarten (ages 3-7). Of those interested in participating, only families where the father was willing to participate were included. For the purposes of this study, father is used to refer to a male caregiver, including biological or adoptive father, stepfather, or legal guardian. Noncustodial grandparents and other family members are outside the scope of this study. A total of 55 father-child dyads participated. However, interruptions due to the COVID-19 pandemic prevented the completion of posttesting. A total of 34 children completed testing: three 4-year-olds, 23 5-year-olds, six 6-year-olds, and two 7-year-olds.

Measures

At the beginning of the study, fathers were asked to complete a questionnaire. The questionnaire asked about aspects of the home literacy environment (HLE) in addition to demographic information (see Appendix). Factors of the HLE included access to texts and the frequency with which the fathers engaged in literacy activities with the children.

Two standardized assessments, *The Peabody Picture Vocabulary Test*, 5th Edition (PPVT-5; Dunn, 2019) and the *Test of Early Reading Ability*, 4th Edition (TERA-4; Reid et al., 2018), were used as the pre- and post-test measures. The PPVT-5 was selected to measure receptive vocabulary. During this assessment,

children must identify which one of four pictures represent a target word. The TERA-4 Alphabet subtest was used to measure phonological and alphabet knowledge. Tasks in the Alphabet Subtest require children to identify beginning and ending sounds of words, distinguish letters from numbers, name letters, and produce letter sounds. To measure concepts of print, the TERA-4 Conventions Subtest was used. One portion of the subtest presented the child with stimulus pages which included tasks requiring children to distinguish print from pictures, identify different types of print, interpret symbols, explain the purpose of punctuation marks, and read environmental print.

Intervention

Fathers were asked to read with their children at least five times a week for an 8-week period. They could select books from book boxes provided at their children's schools or provide their own. Once a week, the fathers were asked to return a log of the number of reading sessions and titles of books read to their children's daycare centers/schools. The log also had an optional text box at the bottom to provide details about the reading sessions. Children received an incentive, a children's book or literacy-related educational activity, for each log that was returned.

Findings

Children's pre- and post-test scores on the PPVT-5 and TERA-4 subtests were compared to address the research question: What emergent literacy behaviors do children gain when reading with fathers? For each measure of emergent literacy, the pre- and post-test scores were compared using one-tailed paired t-tests (see Table 1). As each of these were treated as a separate question, t-tests were used rather than ANOVA to determine the statistical significance of changes for each individual measure of emergent literacy.

For the PPVT-5, there was a significant difference in the pre- (M=103.24, SD=10.99) and post-test (M=106.82, SD=12.73) scores; $t(33)=2.39$, p=0.02. There was a medium effect size (d=0.76) for PPVT-5 scores, falling just under Cohen's (1988) convention for a large effect (d=0.80). There was not a significant difference in the pre- (M=9.18, SD=2.01) and post-test (M=9.32, SD=2.45) scores for the TERA-4 Alphabet Subtest; $t(33)=0.46$, p=0.65. The effect size (d=0.41) for the Alphabet Subtest was above 0.20, indicating a small effect (Cohen, 1988). Also, there was no significant difference in the pre- (M=9.12, SD=1.94) and post-test (M=9.32, SD=1.72) scores of the TERA-4 Conventions Subtest; $t(33)=0.85$, p=0.40. There was a small effect size (d=0.48) for the Conventions Subtest.

TABLE 1
Results of One-Tailed Paired t Tests Comparing Pre- and Post-Test Scores on Measures of Emergent Literacy Behaviors

Measure	Pretest		Post-Test		$t(33)$	p	Cohen's d
	M	*SD*	*M*	*SD*			
PPVT-5	103.24	10.99	106.82	12.73	2.39	0.02	0.76
TERA-4 Alphabet Subtest	9.18	2.01	9.32	2.45	0.46	0.65	0.41
TERA-4 Conventions Subtest	9.12	1.94	9.32	1.72	0.85	0.40	0.48

Discussion

The findings of this study align with prior research which suggests fathers' joint book reading has a positive influence on children's emergent literacy development (Pillinger & Wood, 2013; Sims & Coley, 2016). Children's scores increased from pre- to posttest in all three measures of emergent literacy behaviors: vocabulary, phonological and alphabet knowledge, and concepts of print. As has been found in prior studies, the fathers' most significant contributions were in vocabulary (Conica et al., 2020; Panscofar & Vernon-Feagans, 2006; Rowe et al., 2004).

A potential explanation for the fathers' influence on vocabulary in this study is that joint book reading with fathers rather than mothers was likely a novel experience for the children in this study. Despite reports of changing gender roles in society at large (Banchefsky & Park, 2016), it appears traditional gender roles were still upheld for many rural families in this study. When they saw the researcher at their child's daycare centers/schools, mothers would often share that their children were enjoying the change of having their fathers read to them. Although the fathers were the ones participating in the study, mothers often completed and returned the weekly reading logs. In the open-ended text box of the logs, mothers stated children were excited for the new routine of their fathers reading to them daily. Although these statements may not be true for each father-child dyad, it could be one reason for the increase in vocabulary scores.

As these reading sessions with fathers were a new experience for many children in the study, this supports the bridge hypothesis (Gleason, 1975). As previously stated, the bridge hypothesis states mothers, who spend more time caring for the child, understand children's attempts to communicate. However,

fathers stretch the children's communicative abilities by asking them to clarify what they are saying. Hence, the joint book reading sessions with fathers led to growth in children's vocabulary in a way that reading with mothers may not.

Although the novelty of joint book reading with fathers may have benefitted children's vocabulary growth, it could have the opposite effect on knowledge of concepts of print. Questionnaire responses and informal conversations with the researcher indicated fathers were less likely to engage in joint book reading prior to the study. Children's understanding of concepts of print increases when parents direct their attention to aspects of the book while reading (Hindman et al., 2014; Weigel et al., 2006). Yet, parents often need training in order to engage in print referencing behaviors (Justice & Ezell, 2000). Hence, the fathers in this study may not have established joint book reading routines that maximize opportunities for teaching concepts of print.

In keeping with previous research, children's growth in phonological and alphabet knowledge was less than that of vocabulary (Quach et al., 2018). Although the growth was small, it was greater than groups from the larger study. This can possibly be explained by responses on the questionnaire. Fathers in this study had higher levels of educational achievement, owned more adult books, and read for their own purposes more frequently. Parents with higher levels of education and adult literacy are more aware of the benefits of joint book reading (Duursma, 2014). This awareness leads to more frequent reading sessions and increases in children's phonological and alphabet knowledge, along with other emergent literacy behaviors (Pancsofar & Vernon-Feagans, 2010; Taylor et al., 2016). Additionally, fathers reported large numbers of children's books in the home which has been linked to stronger phonological awareness and letter knowledge (Skibbe & Foster, 2019).

Limitations and Conclusion

While this study provides useful insights into the impact of rural fathers reading with their preschool and kindergarten children, there are a couple of limitations. First, only 20 of the 34 fathers returned the questionnaire. Thus, their responses do not represent the entire group. For this reason, conclusions about the impact of demographic and HLE factors on children's emergent literacy behaviors must be made cautiously. As previously mentioned, the study was interrupted due to school closures resulting from the COVID-19 pandemic. Not all child participants were able to complete posttesting, reducing a small sample even further. Future research with a larger number of rural father-child dyads is warranted.

Despite the limitations of this study, the findings aligned with prior research. Joint book reading with fathers led to increases in all emergent literacy

behaviors measured, especially vocabulary. Further, participating in the study led to greater interest in and increased frequency of reading at home. This was indicated through comments on the weekly reading logs, such as "[my daughter] looks forward to our nightly reading and quiet time together" and through the regular reading sessions her "interest in reading grew." Additionally, through the study fathers took a more active role in childrearing tasks typically attributed to mothers. As one stated, "I've had a more difficult time not reading as it's typically been my role, but [my husband and daughter] are enjoying this time." As indicated by these comments, fathers' participation in activities to build emergent literacy behaviors is impactful and further research is needed to document their contributions.

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Appendix
HLE Questionnaire
Home Literacy
Questionnaire

Please complete and return to your child's teacher.

Your name:

Your age:

☐ Under 18   ☐ 33-37
☐ 18-22   ☐ 38-42
☐ 23-27   ☐ 43-47
☐ 28-32   ☐ 48-52
                 ☐ 53 or over

Your highest level of education completed:

☐ Some high school
☐ High school diploma/GED   ☐ Vocational degree
☐ Some college   ☐ Bachelor's degree
☐ Associate's degree   ☐ Master's degree
                          ☐ Doctoral degree

Your annual household income:

☐ $24,999 or less   ☐ $75,000-$99,999
☐ $25,000-$49,999   ☐ $100,000 or more
☐ $50,000-$74,999   ☐ Prefer not to answer

Which best describes your household?

☐ Single parent home
☐ Both biological or adoptive parents live in the home
☐ A biological or adoptive parent and a step-parent live in the home
☐ Other - Please explain: _____

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Child's name: Child's age:

Ages and genders of other children in the home:

Approximately how many **adult** books do you have in your home?

☐ 0   ☐ 60-79   ☐ 140-159
☐ 1-19   ☐ 80-99   ☐ 160-179
☐ 20-39   ☐ 100-119   ☐ 180-199
☐ 40-59   ☐ 120-139   ☐ 200 or more

How often do you **read or write at home**? (This can be for work or pleasure and <u>does not include reading to your child</u>.)

☐ Never or rarely   ☐ Weekly
☐ A few times a year   ☐ Daily
☐ Monthly   ☐ Multiple times a day

How many **children's** books do you have in your home?

☐ 0   ☐ 60-79   ☐ 140-159
☐ 1-19   ☐ 80-99   ☐ 160-179
☐ 20-39   ☐ 100-119   ☐ 180-199
☐ 40-59   ☐ 120-139   ☐ 200 or more

Check all that apply:

☐ I like to play indoors with my child.   ☐ My child likes to play indoors.
☐ I like to do outdoor activities with my   ☐ My child likes to play outdoors.
   child.   ☐ My child likes to read books with me.
☐ I enjoy reading to my child.

How often do you **read a book to your child**?

☐ Never or rarely   ☐ Weekly
☐ A few times a year   ☐ Daily
☐ Monthly   ☐ Multiple times a day

How often do you **tell stories to your child** (not reading from a book)?

☐ Never or rarely   ☐ Weekly
☐ A few times a year   ☐ Daily
☐ Monthly   ☐ Multiple times a day

How often do you **sing songs to/with your child**?

☐ Never or rarely   ☐ Weekly
☐ A few times a year   ☐ Daily
☐ Monthly   ☐ Multiple times a day

How often do you and your child **visit the library**?

☐ Never or rarely   ☐ Weekly
☐ A few times a year   ☐ Daily
☐ Monthly

How often do you **visit a bookstore**?

☐ Never or rarely   ☐ Weekly
☐ A few times a year   ☐ Daily
☐ Monthly

How often do you **shop for books online**?

☐ Never or rarely   ☐ Weekly
☐ A few times a year   ☐ Daily
☐ Monthly

I believe:

☐ It is the **teacher's** job to teach reading and writing to my child.
☐ It is my job as a **parent** to teach reading and writing.
☐ The teacher and I should **both** teach reading and writing to my child.

If you teach your child reading and writing at home (i.e. singing the alphabet song, how to write his/her name, names and sounds of letters), what activities do you do?

What activities **not** related to reading and writing do you do with your child at home?

I would be willing to participate in a follow-up interview:

☐ Yes
☐ No

If yes, how would you like to be contacted?

☐ Text- Number _____

☐ Email- Address _____

☐ Phone Call- Number _____

FANFICTION & WRITING ENGAGEMENT FOR LINGUSITICALLY DIVERSE STUDENTS

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Abstract

Linguistically diverse students are often defined as students for whom English is not the primary oral language. Studies focusing on fanfiction writing with this population of student has supported fanfiction as being beneficial for students' acquisition of English language and writing. This article explores fanfiction writing's potential for supporting a broader definition of linguistically diverse students: traditional English learners, students on the autism spectrum, and Deaf and hard-of-hearing students. While these three categories of learner do not encompass all students who may be considered linguistically diverse, this analysis explores the literature related to the language and writing needs of each of the three student categories, promising practices for writing instruction for each, and how these align with literature on fanfiction writing.

Keywords: fanfiction, writing, English learner, emergent bilingual, autism spectrum disorder, ASD, Deaf, hard-of-hearing, American sign language, ASL

Introduction

Theres a 3 little mincraft builders were friends, but his dad said I'm sorry my son dad said I don't have more room for you in my house. His dad said go to an adventure and then they stop nere those wood block, stone brick and red brick. Steve make his house wood, teal princess make

her stone brick house, and alex make his red brick. In one hour 3 little mincraft builders are done.

Students with diverse language needs have been found to experience difficulty producing sufficient writing quantity and quality in a typical classroom setting (Acardo et al., 2020; Finnegan & Acardo, 2017; Herrera-Marmolejo et al., 2020; Zajic et al., 2020). While motivating students to write can be challenging for teachers in the K-12 schools, particularly students with diverse language needs, tapping into individual student experiences and strengths encourage students to become highly engaged, effective writers (Barcellos et al., 2020; Black et al., 2019; Lee, 2011). Often, teachers need innovative teaching methods to encourage student writing.

The purpose of this article is to promote the use of fanfiction as a method to support students identified as linguistically diverse. While there is much written supporting the integration of fanfiction writing for students for whom English is a second oral language (see Barcellos et al., 2020; Black, 2006; 2009; Black et al., 2019), such as such as Spanish or Vietnamese to name a few, teachers could be encouraged to use a fanfiction model of writing instruction to support a more inclusive definition of students who are linguistically diverse yet have been left out of the literature. This article will not only focus on literature supporting students who are traditional English learners (TEL) but will include an exploration of literature focusing on two other populations of linguistically diverse students: those identified as Deaf or hard of hearing, for whom American sign language (ASL) may be the home language; and students on the autism spectrum (ASD), for whom spoken and written language is very often a challenge. While these three populations of students do not encompass the wide range of linguistically diverse students, this article will focus on the literature supporting writing for TEL, Deaf and hard of hearing, and ASD students.

In the excerpts provided in this article, the reader is given a creative writing example from one linguistically diverse fifth-grade student on the autism spectrum who was provided the opportunity to write a story using ideas from his favorite video game, Minecraft. Where this student would usually struggle to produce more than perhaps a four-sentence paragraph in class, the modified fanfiction that he produced resulted in two pages, handwritten. This is just one illustration of a linguistically diverse student deeply engaged in a creative writing endeavor when provided the opportunity to write about his passion.

To capture all students' strengths as writers and approach instruction in an asset rather than deficit orientation, educators could engage students in authentic writing activities (Atwell, 2000; Dyson, 2013). Certain factors could

be taken into consideration in supporting student literacy achievement. Most importantly, educators could get to know their students and their interests as a way of creating meaningful literacy experiences that will engage them as readers and writers (Atwell, 2013; Gallagher, 2011; Miller, 2009).

Student motivation to write is an ongoing challenge for teachers of writing, particularly when the student does not identify as a writer and may have difficulty seeing writing as having personal value (Wigfield et al., 2004; Wright et al., 2020). However, bringing popular media and culture into classroom instruction could be an effective way to make literacy engaging and more relevant (Bippert 2017, 2021). Popular media can often serve as a mentor text for students who may otherwise not have the motivation to engage in writing. When considering the needs of students with diverse language needs, fanfiction could be effective in not only motivating students to write (Black et al., 2019) but providing adolescents a collaborative, authentic audience (Magnifico et al., 2015). Engaging in online fan spaces could positively develop students' literacy skills (Curwood, 2013).

There are a variety of reasons children may have difficulty with in-school writing. Some of these may be the student's English proficiency, perceived difficulty with writing, or even motivation and engagement in the classroom. By focusing on student interests and utilizing popular media and culture, teachers could help bridge students' deep knowledge and interests while supporting engagement in writing.

Fanfiction and Writing Motivation

In one hour 3 little mincraft builder are done. At night theres a enderman walking slowly, and then he knocking the door than enderman said someone home said the ender man, whos there said Steve.

Fanfiction is fan-generated stories that are based on familiar storylines and characters derived from popular culture and media. Films, books, comics, video games, music, and popular artists are all common foci for creators of fanfiction. Fanfiction is not limited to written stories; it can include art, musical parodies, and live-action video. Providing students with a choice of modalities could be one way to actively engage students in writing (Dyson, 2013). These creations bring new life and new adventures to familiar characters and stories (Black, 2009). Online fanfiction community participants are self-motivated and passionate about the world that they are immersed in. For students who already engage in online fan communities, utilizing the students' personal pursuits and

interests in the classroom could become a significant way to provide students access to using technology and media tools with written language (Black, 2009). For students unfamiliar with fanfiction, bringing some of the ideas provided by fanfiction into writing instruction, such as generating stories based on what the student is highly interested in, may open new avenues and possibilities for becoming effective and engaged writers.

Fanfiction is authentic writing. Some educators and adults may disagree and see the appropriation of existing texts and ideas as "stealing" rather than genuine writing. Jenkins (2006) compares this type of appropriation similar to that of artists from the past, where the learner takes what they have learned and "focus their energies elsewhere, mastering their craft, perfecting their skills, and communicating their ideas" (p. 182). With fanfiction, students use language in creative ways and are free to create from an existing starting point or frame of reference.

Students can share their fan creations in a variety of ways. For older students, sharing work can be done on a range of fanfiction outlets: Fanfiction.net, Webnovel.com, and Wattpad.com are just a few. For younger students, creations can be shared in authentic ways through a class or school webpage, or even a teacher-created page open to a limited audience.

Students with linguistic diversities, including English learners and other students who experience difficulty with writing in school settings, can gain confidence in writing when collaborating with other students or peers with shared interests (Black, 2006; Vazquez-Calvo et al., 2019). Collaborative fanfiction efforts provide students with feedback and suggestions on writing in a non-threatening, encouraging atmosphere (Bailey, 2019). This peer network can scaffold a writer's skills through participating in these communities of writers and creators.

Fanfiction can also act as a cultural bridge for newly arrived immigrant students. Black (2009) found that students who were immersed in fanfiction learned much-needed cultural knowledge through their participation in fan communities. Students were also found to be more willing to share written creations with classmates and become more confident with language. Their contributions to a fan community provided the motivation for students who otherwise have difficulty with written English to write more, and therefore develop their English writing skills (Smythe & Neufeld, 2010).

Educators could promote writing through the use of a fanfiction model of instruction. Based on personally meaningful content, students could be drawn into using language and writing in authentic ways. In this way, linguistically diverse students could build on language and writing fluency and develop their writerly identities.

Theoretical Framework

An individual develops multiple identities through their interactions with both their social and cultural interactions (Gee, 2001). Linguistically diverse students learn particular Discourses through these interactions. A Discourse may include specific ways that a particular group speaks, behaves, and interacts with others (Gee, 2001). Individuals may find themselves involved in a variety of activities over the course of their lives, and Discourses may change depending upon the activity in which they engage. In the classroom, students learn the Discourse of the school through their interactions and feedback from peers, teachers, and other individuals in that context (Moje & Dillon, 2006). As a result, students will have various attitudes and perceptions of how they fit in that classroom (Coombs, 2012; Lenters, 2006; O'Brien, 2006).

Linguistically diverse students have a variety of experiences with written and spoken language, which may include the dominant language at school and society and the language used in the home (Bippert & Elizondo, 2019; Menken & Kleyn, 2010). For students on the autism spectrum, the home and school language are often the same; the student on the autism spectrum may experience language difficulty in both environments, however. Students who are traditional English learners (TEL) and Deaf students participate in in-school literacies with a variety of experiences in the school's Discourse, as well as in language use in the home language and English. The students' Discourses must fit the specific needs of various settings: school, home, and the larger community (Moje et al., 2004). The quality and quantity of these interactions will impact their membership within the classroom.

When considering language, either spoken or written, students come to understand their position within each context, such as home versus school settings. Positioning Theory (Harré, 2005) describes how individuals fit within each social context, along with the roles and duties associated within. Different contexts will often result in different positions for the same student. The positions that individuals take on in any context are often implicit, agreed upon by those interacting within that setting. For example, a student who finds writing English in the classroom difficult will be positioned a certain way based on the social norms within that classroom setting. Here, the students will possibly be considered a learner, one who may need assistance from more competent peers or teachers. At home, however, this same student could be positioned as more competent in the second language and be considered a valuable family resource when communicating with the larger community. The student will find that they must shift between multiple Discourses and positions throughout the course of the day (Moje et al., 2004).

This shifting of Discourses and positions can result in the differences between rights and duties, depending on the social context. In the previous example, the student takes on the role of learner, where their duties may include the need for a peer tutor or requiring additional assistance with written and spoken language. On the other hand, in the home the student will take on the role of the more experienced and proficient user of a second language. Within each context, individuals implicitly agree upon the rules, the rights, and the duties assigned to each. As a result, the position that a student takes on, particularly in a school setting, will affect how they view themselves as learners (Davies & Harré, 1990).

In an effort to support students' development as writers, it is important to understand how linguistically diverse students are positioned within the classroom, focusing on their identity as writers. Students who engage in fan-based writing are brought into a community of like-minded peers, whereas in other situations a student may feel marginalized (Thomas, 2006). Linguistically diverse students, who may be positioned in the classroom in ways that do not value their literary contributions, find a place where they share knowledge in meaningful and genuine participatory ways.

Literature Review
Linguistic Diversity Defined

For the purpose of this article, students with diverse language needs will be used to encompass a variety of student language issues. In much of the literature focusing on linguistic diversity, the students who are often the focus are those for whom a language other than English is spoken in the home, which is also closely tied to their cultural identities. Here, the definition of individuals with diverse language needs will include other students who experience difficulty with the English language, particularly in speech and writing. For example, deaf students, whose first language in the United States may be American sign language (ASL), have been found to experience difficulty when writing in English (Wolbers et al., 2014) in similar ways to other English learners. Additionally, students on the autism spectrum who experience difficulties with spoken language often have a difficult time producing writing that is consistent with English syntax and mechanics (Pennington & Carpenter, 2019; Tomlinson & Newman, 2017). Additionally, students with autism spectrum disorder (ASD) often have delayed or limited language abilities, which is reflected in the students' written work (Finnegan & Accardo, 2017). Therefore, this article focuses on a wider range

of students who may experience difficulty with language. While this broader definition of linguistic diversity encompasses a variety of reasons for a student's difficulty with written and/or spoken English: those identified as traditional English learners (TEL), Deaf and hard-of-hearing students, and students with ASD will be highlighted here.

Needs of Diverse Language Learners

Given the broader definition of students with diverse language needs, the literature related to students' writing is summarized here. The literature will include a focus on the writing needs of students identified as traditional English learners (TEL), Deaf and hard-of-hearing students, and students with autism spectrum disorder (ASD). Based on a socio-constructivist view of learning, language development necessarily requires shared communication between individuals (Vygotsky, 1978). Linguistically diverse students, therefore, need opportunities to engage in literacy acts as a community of learners, utilizing both their first or home language, while becoming increasingly proficient in a second language. According to a report published by the Midwest Comprehensive Center, many K-12 schools in the United States provide assessments only in the English language on standardized assessments; only five states were shown to provide language arts assessments in a language other than English (Tabaku et al., 2018). Furthermore, studies have shown that providing students support in their home languages to be an effective way for them to learn academic content while becoming more proficient in English. In a study conducted by Aljaafreh and Lantof (1994), language learners who were provided an expert peer for language support were found to become more independent in their language development. Anton and DiCamilla (1999) also found that collaborative opportunities and the use of both home language and English were beneficial in helping students develop language skills that supported learning in the classroom. Unfortunately, the challenge for linguistically diverse students may not only be access to a collaborative language learning environment but access to the student's home language for support.

Literacy is tied to language, a sociocultural process that is related to social interactions and situated meanings and goes beyond spoken words and texts (Gee, 2001). While we can learn much from literature focusing on the power of collaborative engagement for linguistically diverse students, it is important to understand the nature of students' writing. Literature focusing on the characteristics and development of linguistically diverse student writing, along with more recent studies on the topic, are included here.

Traditional English Learners

There is an abundance of literature focused on traditional English learners (TEL). Concerning the need for peer collaboration and the use of the students' home language for support, it has been found that many K-12 schools, particularly at the secondary level, focus efforts on TEL students' use of English, while abandoning the home language. This tendency has been described as subtractive education, whereby the TEL student begins to not only struggle to perform using English but also is unable to the student's culture and language as support (Menken & Kleyn, 2010; Valenzuela, 1999). It had been believed that by utilizing their home language, the acquisition of English and academic skills would be harmed (Valenzuela, 1999). However, TEL students have been found to not only have difficulty learning the second language but also have a difficult time finding academic success (Menken & Kleyn, 2010). In speaking with TEL students, Nguyen and Hamid (2017) found that students often had difficulty developing their social identities, felt discriminated against, and chose to decrease their use of the home language in an attempt to minimize discrimination. It has been suggested that an additive approach, which includes the students' strengths in their home language, would help support student language development as well as content learning. As described by Skutnabb-Kangas (1996), subtractive education is essentially "killing a language without killing the speakers" (p. 90).

Due to challenges associated with how some schools in the United State address education with TEL students, some have maintained the label English learner for many as seven or more years yet still experience language and academic difficulties (Menken, 2012). While there are several compounding factors related to a students' difficulties with English, Menken (2012) argues that schools need to meet the needs of TEL students to help overcome the challenges that students face.

One additional concern is focused on how TEL students may be identified as requiring special education services. Counts and colleagues (2018) explain that a lack of teacher training in the areas of both identifying learning disabilities and understanding language acquisition may cause either over-identification or a delay in providing services to students who would benefit from special education services. More recently, Shin (2020) found that TEL students with disabilities are more likely to require English language support than other TEL students. The issue related to proper identification of students who require support with the English language, and students who require additional special education services, is imperative.

Traditional English learner students' perceptions of writing in their second language may have implications for ways to support writing for TEL students. Bailey (2019) conducted a study to measure students' perceptions of three types

of writing strategies to support TEL student writing. These strategies focused on "planning (before writing), problem-solving (when writing), and corrective feedback (after writing)" (p. 136). In his study of 227 students, survey findings indicate that the least favorable type of strategy was utilizing corrective feedback. The participants typically engaged in seeking help from others, receiving corrective feedback, and using the feedback to develop their writing skills. Bailey suggests that this may have been due to cultural issues among his South Korean participant students; however, it may also have been related to anxiety associated with sharing work in a second language. Bailey suggests utilizing online writing tools, such as Google Translate and Grammarly, to alleviate performance anxiety.

Traditional English learner students benefit from the use of their first language while learning to become proficient in a second language. This would provide students with support for learning and literacy and would help to move students toward proficiency in English faster. To encourage students to utilize their home language and provide them with the confidence to develop identities as writers (Vazquez-Calvo et al., 2019), educators can promote student writing focused on what the students know and care about. A fanfiction model of writing instruction could help support student confidence in their ability to create while alleviating some of the anxiety related to performing in a second language.

Deaf and Hard-hearing Students

Written forms of expression have been shown to be a direct result of a child's ability to access oral forms of language (Horowitz & Samuels, 1987; Horowitz, 2017). For this and other reasons, in the United States, deaf children have more recently been given the label English learners. Menéndez (2009) uses the term "sign bilingualism" as it is related to deaf children and their identification as English learners. Howerton-Fox and Falker (2019) describe three ways that deaf students can receive the label English learners. One way that a deaf child may be labeled an English learner is if their home language is American Sign Language (ASL). This makes up approximately 15% of deaf children in the United States. This considers the deaf child to be bilingual in both English and ASL. Studies have found that children for whom ASL and English are used in the home show similar English language development as children bilingual in two spoken languages and engage in behaviors as code-switching between ASL and English, similar to that of children who speak two spoken languages (García, 2009; Menéndez, 2009). Another reason that deaf children may be labeled English learners is if the child's home language is neither English nor ASL (Howerton-Fox & Falker, 2019). Often identified as deaf multilingual learners (DML), this is a very small subset of deaf children, yet is growing at an increasingly fast rate. Intervention

programs for DML students involve language and literacy experiences, gradually developing the students' academic and social needs. Deaf students may also be labeled English learners when their sole home language is English (Howerton-Fox & Falker, 2019). Children will often receive cochlear implants, particularly in developed countries, which allows the child access to spoken English and reduces the need to learn ASL. However, studies have shown that these implants do not always provide the child with the same quality of experiences with spoken English as a hearing child, resulting in delays in language development (Hall et al., 2019). Therefore, due to their limited ability to experience spoken language, the children may still require support in developing spoken English.

American sign language has its own distinct syntax, grammar, and structure (Stokoe, 1960), and this reinforces it as its own individual language. Distinct differences in writing have been found with deaf students in their English written expression. In a study conducted by Wolbers and colleagues (2014), the authors sought to explore the types of ASL to written English transfers that occurred in student writing. The study found six types of language transfers that took place in student writing: unique glossing and substitution; adjectives; plurality and adverbs; topicalization; conjunction; and rhetorical questions. Unique glossing and substitution occur when the student inserts the indication of a sign within a written text. These are typically written by the student in small capital letters, which describes the signed utterance (Valli et al., 2011). While glossing is not considered an ASL translation, it was one main way that students used ASL to English transfer in their writing (Wolbers et al., 2014). Transfer in adjective use appeared when the noun was written before the adjective. In English, typically the adjective comes before the noun. In this case, a student would write *hat red* rather than *red hat.* Writing issues related to plurality and adverbs appeared as repetition of a word rather than writing the plural form of the word in English, or repetition to show emphasis. For example, a student may write *hurt hurt arm* to indicate emphasis. Similarly, topicalization occurred when the students placed the written word of most importance at the beginning of a sentence or phrase. For example, *winter I hate* could be an example of topicalization in student writing. Conjunction transfers occurred as well, and are similar to glossing where the writer uses an ASL gloss to tie two ideas together in a sentence. Additionally, rhetorical questions were used, yet are not actual questions but the use of question formats within the writing to convey ideas.

What the Wolbers study tells us is that not only is ASL its own individual language, many of the ways that ASL first language students advance their skills with written English are similar to TEL students, using their home language to support writing development (Worblers et al., 2014). By honoring and

recognizing students' home languages, educators can support creative endeavors and provide ways to encourage linguistically diverse students to become part of a community of writers. Building on students' knowledge of language, both ASL and English, students can flourish when provided writing opportunities that are grounded in students' experiences and expertise from popular media and culture.

Students with Autism Spectrum Disorder

Literature focusing on strategies to support writing for students with autism spectrum disorder (ASD) is limited (Finnegan & Accardo, 2017; Pennington, 2019), as well as studies that compare this population's writing across groups, such as neurotypical (NT) students. However, a review of existing literature by Finnegan and Accardo (2017) provides a look at what research can tell us about the characteristics of ASD student writing. The authors found that among the qualifying studies, students with ASD showed differences related to the amount of writing they produced, handwriting quality, and the time spent on the writing task. The authors suggested further research into the area of writing for students with ASD, particularly to see if there are any important differences that exist between their needs and the needs of NT students identified as struggling writers. A recent study conducted by Zajic and colleagues (2020) compared the writing skills of students with ASD, students identified with attention deficit hyperactivity disorder (ADHD), and typically developed (TD) children. In this study, the authors found that students with ASD performed low in time engaged in writing, number of words written, writing organization, and writing quality; the lowest area measured was time engaged in the writing task. Overall, writing quality, along with engagement in writing, are both areas of concern for students with ASD.

While earlier publications focusing on instructional strategies for students with ASD were limited, they provided strategies to teachers often focused on behavior management as related to students with ASD placed in the general education classroom. For example, a teacher guide published in 2003 (Marks et al, 2003) provided strategies to teachers related to creating a structured classroom routine, providing materials in a variety of formats, and utilizing graphic and visual organizers to aid in comprehension and retention. While these strategies are important for ASD students, and the authors acknowledged that teachers often feel "ill-equipped to meet their learning and behavioral needs" (Marks et al., 2003, p. 50), specific strategies to support writing, creative or across content areas, was not a focus. A recent study conducted by Pennington (2019),

however, found that strategies that support students with ASD included strategies that reinforced self-regulation, as well as student choice, and goal setting. The recommendations that the author suggests, "teaching skills within a meaningful context, organizing instruction around predictable routines, employing technology-based supports, teaching explicitly, and using self-management strategies" (p. 194). While these ideas include much of what earlier publications suggest, Pennington's recommendations take into consideration the child's need for meaningful experiences related to writing, as well as integrating technology when appropriate. Based on a synthesis of research conducted by Accardo, Finnegan, Kuder, and Bomgardner (2019), writing interventions that were found useful for students with ASD include a variety that is often found useful with NT students. Self-regulation during the writing task was reported to be a focus among the articles included in the synthesis, along with providing students access to interventions that focus on motivation, choice, the use of technology, the use of multimodal expression, and collaboration with peers. This meta-synthesis suggested a broad array of strategies found to be useful in supporting students with ASD.

Tomlinson and Newman (2017) took a "neurodiversity approach" to writing instruction for students with ASD. The authors interviewed 29 individuals with ASD, asking about their experiences with writing. The participants were "self-described, high-functioning autistics" (p. 96). The authors reported that the participants found writing comes easiest when the topic is genuinely important to the individual. The more difficult aspect of writing for the participants was using written language to get their ides across and attending to their audience. The writers' "adaptive techniques" (p. 100) included storyboarding, outlines, and freewriting. Participants also included unique techniques that they utilized such as word sorts, routines to help eliminate or highlight words and sentences, and comparing writing to different audiences with "writing in various foreign languages" (p. 100).

The Tomlinson and Newman (2017) study indicates that, as with NT students, choice is important. Some common support strategies are found to be beneficial in helping students generate writing. However, unique to students with ASD is the challenge of utilizing the English language for communication purposes. Rather than focusing on the deficit often seen in linguistically diverse students, such as students with ASD, educators may be able to tap into their strengths and help build them into successful users of language and writing. By providing students with a choice of topic, students with ASD can integrate their interests with writing, thereby practicing and developing language and literacy skills.

Discussion

Then ender man talk to 3 friends can I come in said polettley twice again, no both said together their anger again, than I'll break, than I'll break, than i'll break your house but ender man didn't break the red brick house, but he teleported on the roof, than 3 frinds were shock, they have to do something fast

Considering the needs of linguistically diverse students, fanfiction has the potential to help address the needs indicated in literature focusing on student writing. This section of the article will include overarching themes related directly to research on Fanfiction and findings from studies with linguistically diverse students. The vast majority of literature on fanfiction and linguistically diverse students focus on TEL students. And while classroom practices may not mirror experiences that students have on fanfiction online platforms, replicating the choice, modality, and collaboration can help educators develop their own fanfiction instructional model. Based on what we know about the writing needs of the students described in this article, we can see how utilizing fanfiction can help support the development of both writing and language.

Fanfiction Is Interactive and Engaging

Rebecca Black and colleagues (2019) describe fanfiction as an "audience-driven, interactive form of writing" (p. 30). Fanfiction provides students ways to collaborate with other fans, in and out of the classroom; collaborative strategies were found to be important for language and writing development for linguistically diverse students described in this article (Black, 2006; Vazquez-Calvo et al., 2019). While students on the autism spectrum showed a distinct need for support in the area of writing engagement, the interactive nature of fanfiction could help support the area of motivation and increased engagement.

Fanfiction Promotes Student Agency

Providing students with a choice of writing topic supports student motivation. While this is nothing new in the literature on literacy, it is important to address it with linguistically diverse students. Providing students with choice was indicated as an important part of supporting linguistically diverse student writing. Drawing on their own individual interests and passions not only motivates but helps students tap into their existing knowledge and understanding of these interests (Black, 2006). Along with a choice of topic could be the choice of

language (Vazquez-Calvo et al., 2019). Utilizing the home language to support and even enhance storytelling will serve as a bridge to developing written English. With fanfiction, the student becomes the expert and will be better equipped and motivated to use language in creative and authentic ways.

Fanfiction Supports Writer's Identity

What we know about positioning theory is that an individual's identity, for themselves and accepted among members of the larger group, determines that individual's expected behavior within the larger group. If a particular group, such as linguistically diverse learners, is limited in their roles or duties, this could be a detriment to the student's ability to actively engage in writing tasks. The student's identity as a writer could play a crucial role in providing them with motivation to actively engage in writing. In her investigation of the experiences of one TEL fanfiction participant, Black (2006) found that as they engaged in online writing, their online identity changed as well. Identity for this participant was fluid and shifted over time, yet they were actively engaged and collaborating within this writing community. Similarly, Martins (2020) explained how students' engagement in affinity spaces provided them with an avenue to a community of like-minded, passionate writers who actively socially construct language. Fanfiction provides students with ways to be legitimized as active, valued contributors.

Fanfiction Supports and Develops Discourses

As it applies to affinity groups, Discourses are shared attitudes, languages, and cultures related to a topic of deep interest (Gee, 2001). Likewise, a shared fan Discourse develops a student's writerly identity and legitimizes their membership in a shared space. Black and colleagues (2019) describe how certain discourses in society, as they are related to language and culture, could be explored through fanfiction; online writers explore such topics as advocating for a marginalized group through their creative endeavors, through the lens of favorite characters and settings. Similarly, Martins (2020) noted that shared discourses and social models may change as a result of their engagement with one another. Likewise, linguistically diverse students could be provided a way to push back against discourses that may position them in ways that minimize their engagement in schools.

Fanfiction Encourages Language Appropriation

The appropriation of language entails taking new language and making it your own, perhaps even putting your own twist on it, which could make the language

more personal and meaningful. Participants engage in language appropriation through their involvement with fanfiction (Black, 2006; Vasquez-Calvo et al., 2019). Participants read, share, and reuse similar words and phrases within their own writing. This play with language takes place within fanfiction as participants experience, read, and write language related to the fan space in which they are participating. Members within the community share knowledge, language, and written creations, flexibly practicing literacy skills within an engaging community of collaborators.

Fanfiction Promotes Authentic Writing Opportunities

While true for those participants who engage in online fanfiction, online fanfiction websites have become authentic avenues to share writing with individuals who have a shared passion and affinity (Barcellos et al, 2020; Black et al., 2019; Lee, 2011). Using fanfiction in the classroom will look different depending on the classroom and the characteristics of the students. For the elementary classroom, providing students with an open choice of topic, encouraging students to choose characters and topics of high interest, and providing a space where students can freely explore and develop language, all while telling their stories. For secondary students, utilizing online fanfiction sites, or providing them with an alternative online outlet for publication, may be a great way to encourage linguistically diverse students to come to enjoy writing.

Conclusion

> *They have to do something fast for it's to late, ender man on the chimney,*
> *3 friends use a iron box and iron buket of lava and ender man almost*
> *down the chimney*

Allowing students to work alongside other students with the same interest will help the student practice language in a safe space, alleviating the anxiety often associated with second language performance, and promoting students' inclusion as active members of a writing community. With fanfiction, students develop their writerly identities, engage in authentic writing that has personal relevance, and become part of a collaborative group of fans who support one another in writing and language.

While fanfiction may show promise in supporting students with diverse language needs, there is not necessarily a clear fit for the use of online platforms with students identified with special needs. Fanfiction has the potential to

support a broad range of linguistically diverse students, such as ASD students, in similar ways to how it supports traditional English learners. However, the use of online fanfiction has the potential to act as a barrier for students who may require additional support. Lammers and Palumbo (2017) investigated the website FanFiction.net to see if the site was accessible to users who require additional assistive support. The assistive technology focus was screen readers used on the FanFiction.net website. Lammers and Palumbo found that students who may require assistive technologies, such as students with ASD as well as deaf students, may face challenges when trying to engage with the fanfiction site in meaningful ways, such as reading other contributors' works, communicating with contributors, and collaborating on creative projects. These challenges aside, fanfiction could still be utilized to help improve students' positioning within the writing classroom. Fanfiction platforms could be made accessible to individuals of all abilities.

The excerpts included throughout this article came from an original story created by a linguistically diverse fifth-grade student, whose deep passion for all things Minecraft and his vast knowledge of the game enabled him to write his two-page saga based on the story of the Three Little Pigs. This student found great pride in knowing that this story, his favorite story, had been saved for all of these years. This narrative became the initial motivation the author to learn more about how a fanfiction model of writing instruction could support many types of linguistically diverse students.

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ELEVATING TEACHER IDENTITY AND CREATIVITY IN PEDAGOGY

IMPROVING HIGH SCHOOL STUDENTS' READING COMPREHENSION USING SCRIPTED STORIES

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Abstract

In this study, one hundred secondary students were randomly assigned to a treatment or comparison group. The treatment group received a Reader's Theater version of a story to read aloud as a group. The comparison group received the same story in its regular format to read silently. Both groups' reading comprehension were assessed using a 10-question quiz related to the text. According to the results of the one-way ANOVA, students in the Reader's Theater treatment group significantly outperformed the silent reading comparison on the reading comprehension assessment, indicating that providing students with scripted stories and the chance to perform them can improve reading comprehension. Practical implications and limitations are also discussed.

Keywords: Reader's Theater, Comprehension, Adolescent Literacy

Introduction

The diverse reading requirements throughout high school years can challenge even the most proficient reader. From unknown vocabulary to text complexity,

fully comprehending what is read is an ever-evolving process that requires mindful planning and pedagogy (Unsworth et al., 2022). More so than the elementary and middle grades, high schools require readers to navigate the content areas using disciplinary literacy skills to overcome issues related to text complexity (Spires et al., 2018).

According to the recent data from the National Assessment of Educational Progress (U.S. Department of Education, 2019), only 37% of the 26,700 twelfth graders tested scored proficient or above. Since 1992, the mean scale scores in twelfth have decreased by 7 points. There is clearly a need to further explore ways to help students better comprehend text, especially in the secondary grades. This study examined the effects of performing scripted stories on high school students' reading comprehension.

Literature Review

Reader's Theater is an instructional activity where students perform a scripted text. While there are many forms and ways of implementing Reader's Theater, there are some common elements. First, a script is selected, or a text is transposed into a script format. Then, students select or are assigned parts. In many implementations in elementary grades, students rehearse for some amount of time. In all iterations, students perform the text. The inclusion of a performance offers some authenticity to the activity, in that students are reading aloud for a reason. The performance, however, does not require acting or props, but uses only student voices for entertainment (Rasinski, 2010).

Reader's Theater has been studied extensively in elementary grades. Early research on Reader's Theater primarily focused on students' reading fluency development. Studies focused on reading fluency found that use of Reader's Theater in the classroom improved word recognition automaticity (Corcoran & Davis, 2005; Martinez, et al., 1998/1999; Millin & Reinhart, 1999; Young & Rasinski, 2018) and prosody (Clark et al., 2009; Keehn, 2003; Young & Rasinski, 2018), which are the main components of reading fluency.

Indeed, reading fluency should also be a concern for secondary grades (Paigee et al., 2012), as not all students who exit elementary school are fluent readers. Reading fluency is often referred to as the bridge to comprehension, and thus developing the fluency of any aged reader should lead to increased comprehension (Rasinski & Young, 2015). According to automaticity theory, if students are more automatic in word recognition, their cognitive energy is freed and can be redirected to meaning-making and understanding what they read (LaBerge & Samuels,

1974). Studies on Reader's Theater support this theory, in that it has been shown to improve reading comprehension (Garrett & O'Connor, 2010; Griffith & Rasinski, 2004; Keehn, 2003; Young et al., 2019) and overall reading ability (Garrett & O'Connor, 2010; Millin & Reinhart, 1999; Vasinda & McLeod, 2011).

Although little research has been conducted on the use of Reader's Theater or scripted stories in secondary grades, there appears to be a growing interest in its use with older students, especially in international contexts (Amyan, 2018; Kulo et al., 2021; Lo et al., 2021). Lo, Wen and Lin (2021) studied the impact of Reader's Theater on seventh-grade students' reading comprehension. The quasi-experimental study that included 68 students in Thailand found that using Reader's Theater for 10 weeks significantly improved their reading comprehension in English. In addition, Kulo, Odundo, and Kibui, (2021) implemented Reader's Theater in English secondary schools in Kenya. Through qualitative inquiry, the researchers concluded that Reader's Theater helped students become more active in class and they perceived increases in reading comprehension, though no student-level comprehension data were provided to support the perception.

Reader's Theater has also been used to improve speaking skills internationally as well. In a quasi-experimental study conducted with 114 students at an Islamic Senior High School in Palembang, Reader's Theater was found to significantly increase students' English-speaking skills (Amyan, 2018). In another study, (Ruengwatthakee, 2021), Thai college students used Reader's Theater to help with their English pronunciation skills, and they made significant gains in the sound perception test and the effect size was large. Ruengwatthakee also interviewed the participants who reported that using Reader's Theater was motivational and built their confidence.

Research on Reader's Theater in secondary schools is also gaining traction. Reader's Theater is often implemented in secondary schools in various content areas, such as science (Brooks & Nahmias, 2009) and economics (Wulandari & Narmaditya, 2017). However, little research exists on how Reader's Theater may impact reading–though one study included three middle school students with autism spectrum disorder were provided reading interventions that included Reader's Theater. Results from the multiple baseline design indicated that the students' reading comprehension had improved (Drill & Bellini, 2022). Thus, it appears to have an impact on special populations in secondary schools. General classrooms are not often studied and further research is needed, especially because, theoretically, participating in Reader's Theater should have an impact on learning regardless of age.

Theoretical Framework

The theoretical foundation of Reader's Theater or scripted stories aligns with social learning theories because the learning occurs through social interaction. Vygotsky's (1978) described four major aspects of learning, including 1) the zone of proximal development (ZPD), 2) semiotic mediation, 3) concept development, and 4) internalization. The final three are particularly relevant when considering Reader's Theater as an approach to improve reading comprehension.

Semiotic mediation is most simply described as a mental activity or function that requires the use of semiotic tools. In the case of Reader's Theater, the semiotic tools primarily used are reading, speaking, and listening. In this case, listening comprehension is an important part of scripted stories and serves as a scaffold for reading comprehension. Furthermore, if texts are read aloud with prosody that matches the meaning of the text, it may be easier for students to interpret.

Amidst this mediation of these tasks, the next tenet, concept development, begins. Imagine a group of students preparing to read a story for the first time: they only possess their knowledge and experiences to infer what the book may be about. As students begin to read, in a Reader's Theater fashion, the students begin to interact by reading aloud and listening to others. This act begins to change each student's understanding of the text. The change is the result of reading the text as well as the interaction. Concepts begin to develop as a collective and then begin the final phase of social learning–internalization.

After participating in a socially interactive learning activity, which engages students in semiotic mediation and concept development, individuals begin to internalize their new learning. Certainly, students' internal understandings have changed from the beginning to the end and their new knowledge is internalized in unique ways depending upon the discipline(s).

Rosenblatt's (1978) transactional theory and Bank's (2002) transformational theory foreground how learners individually interact with texts during Reader's Theater, but also experience the text together, that is interacting, role playing, challenging, conversing, critiquing, contemplating, and expanding their individual and collective knowledge. Reader's Theater represents an opportunity for the social transformation of both text and learner, as the text becomes lived (Wargo & Garcia, 2021) and the learner becomes engaged (Hautala et al., 2022). The reader and their responses to textual content are influenced by cultural, social, and political factors, as readers (or role players in this case) bring with them background knowledge, traditions, dispositions, and customs that influence how they approach texts and what they glean from those experiences.

Social Texts

The social fabric of Reader's Theater makes disciplinary texts increasingly accessible (Lo et al., 2021), reducing the text complexity that individual learners experience when confronted with challenging texts. Reader's Theater requires mindful selection of curricular materials that are developmentally appropriate and engage readers of all proficiency levels (Duhaylongsod et al., 2015). Developmental skills like social perspective taking (Light, 1979) permit students to transform from undifferentiated world views to understanding how motives and contextual influences impact viewpoints and beliefs (Diazgranados et al., 2015). Reader's theater is an integrated approach for tackling complex texts through discourse analysis and collaborative inquiry (Dascalu, 2014), as texts are interrogated and questioning prevails.

Significance of the Study

Theoretically, considering the varied uses of Reader's Theater in secondary classrooms, and the impact it has on elementary students' reading abilities, investigating whether Reader's Theater can be effectively used in the secondary classrooms is warranted. Also, because of the declining scores of secondary students in reading, teachers need additional ways to help students be successful. In this study, the primary researcher used his own method for using Reader's Theater in the classroom to determine whether it could help his students understand better.

Methodology

The purpose of this study was to determine if significant differences were detected between two groups of students on a reading comprehension assessment. One group, the treatment, read the passage aloud as a scripted story. The comparison group read the passage silently. The study aimed to answer the following research question: What are the effects of using scripted stories on high school students' reading comprehension?

School Context

The 9-12 high school where the study was conducted is part of a rural district in the Midwest. Its student demographics are 93.8% white, 3.6% Hispanic, and 1.6% American Indian/Alaska Native. Fifty-five percent of the students qualify for free or reduced, 52.1% students are male and 47.9% are female, 11.6% of students qualify for special education services, and 1.8% for gifted/talented programs.

Participants

The treatment and comparison groups were randomly selected from six different classes of students grades 10-12. The courses were as follows: 2 sections of 10th grade Honors English II, 1 section of 11th grade English III, 1 section of 12th grade Honors English IV, and 2 sections of 12th grade Mythology, an English elective. The demographics of the 54 students in the treatment group are as follows: 18 were 10th graders, 10 were 11th graders, and 26 were 12th graders. 28 were female and 26 male. Fifty-one were White/Non-Hispanic/Latino, 2 students were Native American/Eskimo, and 2 Hispanic. The demographics of the 46 students in the comparison group were as follows: 18 were 10th graders, 8 were 11th graders, and 20 were 12th graders, 25 were female and 21 male. Forty-four were White/Non-Hispanic/Latino, 1 was Native American/Eskimo, and 1 was Hispanic.

Procedures

The students in this study were all part of classes taught by the same teacher. The treatment and comparison groups were determined by drawing names out of a hat. Within each class, the comparison group received a prose version of the Arthur Conan Doyle Sherlock Holmes short story "The Adventure of the Blue Carbuncle" to read silently to themselves. "The Adventure of the Blue Carbuncle" by Arthur Conan Doyle was specifically selected because it was already part of the curriculum and therefore its use was not disruptive.

The treatment group received a Reader's Theater version of the story to read aloud as a group. The only changes made to the original story to transform it into a script form were the addition of dialogue tags (i.e. "Sherlock" and "Watson") to the lines of dialogue and the removal of instances of "he said," "she said," etc. within the text. (See Figure 1 for an example excerpt.)

WATSON: Then, what clue could you have as to his identity?

HOLMES: Only as much as we can deduce.

WATSON: From his hat?

HOLMES: Precisely.

WATSON: But you are joking. What can you gather from this old battered felt?

HOLMES: Here is my lens. You know my methods. What can you gather yourself as to the individuality of the man who has worn this article?

Figure 1. Example Excerpt

On Day One each class period began with the teacher sending all students in the comparison group to the library with an alternate assignment. The teacher handed out the Reader's Theater script-story version of "The Adventure of the Blue Carbuncle" and asked for volunteers for the nine reading parts. As students volunteered, the teacher assigned the reading parts. Then the students read the script-story aloud. The students used no physical acting and remained seated. The teacher did not read any section of the script, nor did the teacher offer any clarification in regard to the story's plot, theme, or characters. At the completion of the script-story, which took approximately 35 minutes in each section, the students logged into their Chromebooks and took a 10-question multiple-choice reading quiz over the events of the story.

On Day Two each class period began with the teacher sending all students in the treatment group to the library with an alternate assignment. The teacher handed out the prose version of "The Adventure of the Blue Carbuncle" and informed the students they would have 35 minutes to read the story silently to themselves. The teacher did not provide any background on the story, its plot, theme, or characters. At the end of 35 minutes, the teacher instructed the students to log into their Chromebooks and take a 10-question reading quiz over the events of the story.

Both groups received at least 35 minutes to complete the script or story before the quiz. Students within the classes were not aware that the treatment group would be reading aloud while the comparison group would not be. All students took the same 10-question comprehension quiz through Google Forms.

Constructing the Assessment

The development of test items utilized the Dagostino-Carifio model of reading comprehension (1994) as a basis for measuring secondary students' reading comprehension. A five-step process involved: 1) creating knowledge and skill-related questions to include multiple categories of comprehension level (literal and inferential) of content covered in the story; 2) checking the readability of questions using the Flesch-Kincaid grade level equivalency to ensure an acceptable range of text complexity (not to exceed grade 12); 3) creating multiple-choice answers considerate of potentiality, context, and relation of one or more possible answers to the other options; 4) sending the set of questions and answers to an expert panel to review/suggest changes; and 5) make modifications and finalize the quiz for implementation.

Literal questions refer to information explicitly discussed in the passage that require a recollection of facts, also known as message extraction, to answer. Inferential questions, on the other hand, "demand readers interpret meaning

from a combination of overt information with intuition, reasoning, and experience" (Dagostino et al., 2014, p. 3). Including both types of questions in this data set was deemed most appropriate to measure comprehension between groups of students.

Multiple-choice questions were composed using the following considerations as a guide: (a) matching the stem, length, complexity, and phrasing of correct/incorrect options; (b) avoiding fine distinctions between possible answers; (c) refraining from all or none of the above options; and (d) avoiding absolute terms like always, never, etc. (Cashin, 1987). Using these best practices of instrumentation, content validity was a core consideration to ensure measures of secondary students' reading comprehension were accurate.

The questions from the multiple-choice comprehension quiz were as follows:

- ☐ What was one of the themes of "The Adventure of the Blue Carbuncle"?
- ☐ How does this illustration represent the story? (A picture of an event from the text)
- ☐ From what clue did Sherlock Holmes get his deductions about Henry Baker?
- ☐ Who is the real thief of the Blue Carbuncle?
- ☐ Which of the following does Holmes ask Watson to do?
- ☐ How does a thief try to hide a stolen gem?
- ☐ Which of the following words does Holmes use to describe the Blue Carbuncle?
- ☐ Why did Peterson rush into Holmes' apartment dazed with astonishment?
- ☐ What does Holmes do with the thief?
- ☐ Why does Holmes not punish the thief to the full extent of the law?

Data Analysis

The post-test reading comprehension assessment results will be used in the analysis. First, descriptive statistics will be reported including means, standard deviations, standard error, and lower and upper bound confidence intervals. To determine whether statistically significant differences exist between the treatment and comparison groups, a one-way analysis of variance (ANOVA) was

conducted using the reading comprehension assessment as the independent variable and group as the dependent variable. Before the analysis, assumptions will be tested to ensure data meet the assumptions for a parametric analysis.

Findings

One hundred secondary students were randomly assigned to a treatment or comparison group. The final analysis included 94 students after 4 outliers were moved from the treatment and 2 from the comparison. In the end, there were 50 students in the readers theater treatment group and 44 in the silent reading comparison group. Table 1 shows the demographics of the students included in the final analysis.

The descriptive statistics are summarized in Table 2.

TABLE 1
Demographics

		N
Grade Level	10	35
	11	15
	12	44
Gender	Male	45
	Female	49
Ethnicity	Hispanic	3
	Native Amer/Eskimo	3
	White/Non-Hispanic/Latino	88

TABLE 2
Descriptive Statistics

Measure	N	M	SD	SE	95% CI Lower	95% CI Upper
RT	50	8.88	1.304	0.184	8.51	9.25
SR	44	8.18	1.646	0.248	7.68	8.68
Total	94	8.55	1.507	0.155	8.24	8.86

Note. RT = Reader's Theater Treatment; SR = Silent Reading Comparison

Assumptions for ANOVA were tested. A total of six outliers were detected and removed—four from the treatment and two from the comparison. Skewness (-1.03) and Kurtosis (.85) were within the desired range indicating a normal distribution. Lavene's F was not significant (p = .18), and thus the assumption of homogeneity of variances was met. The results of the one-way ANOVA indicated a statistically significant difference between the groups on the reading comprehension outcome measure, and the results were in favor of the treatment group (Table 3).

TABLE 3
ANOVA Summary Table

	SS	df	MS	F	p
Between Groups	11.409	1	11.409	5.253	< .05
Within Groups	199.825	92	2.172		
Total	211.234	93			

Discussion

Overall, this study demonstrated that using a Reader's Theater approach may offer scaffolds that support comprehension in ways that silent, independent reading does not. The results corroborate many of the findings from research in elementary grades (Garrett & O'Connor, 2010; Griffith & Rasinski, 2004; Keehn, 2003; Young et al., 2019) and with special populations in secondary grades (Drill & Bellini, 2022). Thus, if high school teachers desire students to better understand a particular text, then using Reader's Theater as a scaffold could improve their understanding.

The purpose of this study was not to measure the growth of general reading comprehension abilities, but to measure the difference in comprehension of a specific text under a more social condition. Indeed, it makes sense that students who read a text aloud while supporting each other are likely to have a better understanding. This notion aligns well with social learning theories, as the increased comprehension is likely due to semiotic mediation, concept development, and internalization of their understandings. While the support and interaction of the activity may have been the reason for the significantly different performance on the assessment, research on Reader's Theater with younger students reports

the activity is engaging, increases motivation, and improves attitudes toward reading (Martinez, Roser, and Strecker, 1998/1999; Worthy & Prater, 2002). Therefore, it could have been a combination of social learning, student support, and increased engagement. Thus, it could be that other interactive approaches could improve reading comprehension similarly, but that claim warrants further research. Another reason for the increased comprehension might be because it was clear that students read the text. When reading aloud, there is inherent accountability. It is possible that students who were reading silently may have done some skimming or skipping, but one cannot know for sure. One thing that can be said with confidence, however, is that every word of the text was read in the treatment group.

So, perhaps it was a combination of a novel activity, social interaction, support, engagement, and accountability. If this is the case, then this study emphasizes some more general guidelines for planning instruction. While learning and studying by oneself is an important skill, consider times to include social interaction, such as through literature circles, groups of students reading and solving mysteries, or other activities where students are reading together and supporting each other. Also, consider an authentic purpose for their reading, as it holds students accountable. For example, if a teacher chose form groups to solve written mysteries, then students would have to read the text to complete the task. Plus, adding some authenticity, creativeness, and collaboration is often engaging and motivating. Thus, it may not be Reader's Theater, but the fundamentals of the activity that are most important. If this is true, then it means that teachers are free to innovate using those basic principles to create new ways to help students better understand text.

Limitations

This study is not without limitations. The generalizability is limited across demographics as this study had a high percentage of Caucasian students. In addition, the study was conducted in a rural area with over half of the students designated as economically disadvantaged, and thus may not yield similar effects in other areas or contexts. Further research using this method in different contexts and populations will help address these limitations. Also, the researchers used a newly developed assessment which may bring up questions about validity and reliability. Therefore, the research team carefully constructed the assessment using a five-step process and the Dagostino-Carifio model of reading comprehension (1994). While an established test would already contain the validity and reliability information, no standardized assessment existed that was suitable for this study.

Conclusion

From this study we know that the Reader's Theater method can increase reading comprehension of a particular text, but perhaps more frequently using the approach could also generally improve their overall reading comprehension as seen in the elementary grades. Whether it was social interaction, support, engagement, and/or accountability, if secondary teachers want to help students understand a text more fully, then using Reader's Theater might be an effective option.

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TEACHER SELF–EFFICACY AND ATTITUDES TOWARD TEACHING CONTENT AREA LITERACY: AN ANALYSIS OF SECONDARY PRE-SERVICE TEACHERS' SELF REPORT SURVEYS

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Abstract

This study investigates secondary pre-service teachers' self-efficacy and attitudes toward teaching literacy in content area classrooms. It also explores the relations between their efficacy, beliefs, and attitudes as well as differences between their self-efficacy and attitudes by academic majors of represented content areas. The study found that the participants reported generally high scores on both teacher self-efficacy and attitudes toward teaching literacy although the correlation of the two variables was not statistically significant. However, education major students reported higher scores on both teacher efficacy and attitudes toward teaching literacy than did non-education major students.

Keywords: self-efficacy, pre-service teachers, content literacy

Introduction

Although generally pre-service teachers strive to be confident teachers, not all pre-service teachers know what it takes or the amount of effort it takes to learn the skills necessary to be able to engage students in learning (Hoy, 2000). Because of this uncertainty, pre-service teachers often express concerns about being a teacher. With a heightened awareness of the challenges faced by teachers, they often have fears about their teaching careers. They fear they may not be prepared enough to teach, may not be able to accommodate each student in their classrooms, may not provide enough support to students, or may be overworked and undervalued. These fears and anxieties often lower pre-service teachers' self-efficacy and consequently impact their teaching performance (Bray-Clark & Bates, 2003). Bandura (1977b) emphasized that teachers' efficacy beliefs are developed based on their previous experiences. For instance, if pre-service teachers have positive learning experiences during their college education or student teaching, there is a high possibility that they will have high level of efficacy beliefs about teaching and a low level of fear about being a teacher in the future. From this perspective, examining pre-service teachers' efficacy beliefs about and attitudes toward teaching is necessary for teacher educators to understand their fears and concerns about being a teacher.

For this study, teacher efficacy refers to "teachers' confidence in their ability to promote students' learning" (Hoy, 2000). This efficacy is important because it has been identified as a predictor of student engagement and teaching effectiveness (Chesnut & Burley, 2015; Fathi & Derakhshan, 2019; Shu, 2022). Previous studies emphasize the significance of pre-service teachers' confidence in their preparation to teach effectively (Housego, 1990). In her study, Hoy (2000) confirmed the necessity of providing well-timed support and feedback for pre-service teachers to increase their self-efficacy. Also, teachers with a high level of self-efficacy are more likely to be passionate, innovative, and resilient in their teaching (Holzberger et al., 2013).

Teachers' beliefs and attitudes are also closely linked to pedagogical decisions and practices, meaning that teachers' confidence can make a difference in their behaviors, instructional choices, and student achievement (Bean, 2002; Hong-Nam & Szabo, 2017 a, b; Tournaki & Podell, 2005). When teachers are confident, make good instructional decisions, and have a good attitude, it is assumed that they have high efficacy. The current study aims to investigate this assumption through research.

Purpose of the Study

Much of the research on teacher efficacy has examined the relationship between efficacy, school climate, and work environment (Hoy & Woolfolk, 2013), job satisfaction (Granziera & Perera, 2019; Woolfolk Hoy & Spero, 2005), student achievement (Tschannen-Moran & Barr, 2004), job-related stress (Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2014), motivation (Skaalvik & Skaalvik, 2010), and teaching quality (Holzberger et al., 2013). In contrast, little research has been done on the relationship between secondary pre-service teachers' self-efficacy and their attitudes toward teaching literacy in content area classrooms. To bridge the gap, this study attempts to provide information on secondary teacher candidates' self-efficacy and attitudes and beliefs about teaching literacy in content areas. The following research questions guided this study:

1. What is the secondary pre-service teachers' perceived sense of efficacy in teaching?
2. What are the secondary pre-service teachers' attitudes towards teaching literacy in the content area classroom?
3. What is the relationship between secondary pre-service teachers' perceived sense of efficacy and their attitudes toward teaching literacy in content areas?
4. Are there differences in secondary pre-service teachers' efficacy and attitudes by academic majors?

Literature Review
Teacher Self-efficacy

Self-efficacy refers to "an individual's belief in his or her capability to organize and execute the course of action required to produce given attainments" (Bandura, 1997a, p. 3). In social cognitive theory, Bandura (1986) attributes achievement to the combined impact of the environment, an individual's behavior, and his beliefs. Applied to an educational setting, these beliefs can contribute to student learning.

Teachers' self-efficacy and their attitude towards their competency in the classroom have been connected to the ability to be resilient in the work of educating students. Additionally, teacher self-efficacy can lead to higher job satisfaction (Benevene et al., 2018; Gooddar et al., 2000), and can improve the school

environment (Hoy & Woolfolk, 1993). When teachers demonstrate high levels of efficacy, they are "more open to new teaching methods, set themselves more challenging goals, exhibit a great level of planning and organization, direct their efforts at solving problems, seek assistance, and adjust their teaching strategies when faced with difficulties" (Lazarides & Warner, 2020, p. 1).

Based on these attributes, pre-service teachers reporting high self-efficacy should demonstrate more self-confidence in their abilities to lead their future classrooms, and they should bring a positive attitude toward learning to apply literacy strategies in their content areas (Bray-Clark & Bates, 2003). A study with 191 pre-service teachers in Israel (Wertheim & Leyser, 2002) examined the relationship between pre-service teachers' efficacy and their choices of instructions strategies. The study reported mixed results because there was a positive correlation between the pre-service teachers' personal teaching efficacy and their willingness to use instructional strategies, but there was no significant correlation found between their efficacy and willingness to use *differentiated* instructional strategies.

Current research in the field of teacher efficacy has provided consistent evidence that pre-service teachers with a high level of self-efficacy tend to be better at organizing and engaging in teaching (Bray-Clark &Baes, 2003; Granziera & Perera; 2019; Holzberger, Philipp, & Kunter, 2013; Skaalvik & Skaalvik, 2014; Tschannen-Moran & Barr, 2004; Yada, Leskinen et al., 2022; Zee, & Koomen, 2016).

Attitudes toward Teaching Literacy in Content Areas

In addition to improving self-efficacy, research demonstrates that teachers' beliefs and attitudes affect their instructional choices and teaching practices (Dixon, et al., 2016; Hong-Nam & Szabo, 2017a). The consensus of research in the field of teachers' attitudes and beliefs supports a close connection between teacher's attitudes and their instructional decisions (Knopak et al., 1994; Park & Osborne, 2006; Smith & Robinson, 2020). For the purpose of this study, teachers' beliefs and attitudes toward teaching literacy in the content areas refer to the decisions of content area teachers about "what to teach and how they teach it [as influenced by] their beliefs" (Hall, 2005, p. 404). Also, a previous study with secondary pre-service teachers (Hong-Nam & Szabo, 2014) found that secondary teacher candidates reported positive changes in their attitudes and beliefs about implementing literacy strategies into their content areas after a semester content literacy course, indicating that they came to understand the important role of content literacy instruction.

Content Area Literacy and Classroom Practices

Content area teachers face unique literacy demands. Many come to the field with the assumption that most students know how to read effectively by the time they enter their secondary years, yet "they must learn how to adapt reading and thinking strategies to meet the peculiarities and conceptual demands of each discipline that they study" (Vacca, Vacca, & Mraz, 2019, p.17). Given the disciplinary differences, many pre-service teachers are frustrated by literacy coursework that is not specific to the content area they plan to teach (Buehl, 2009). Content area teachers often struggle to see "the connection between content literacy skills and content information" (Wilson et al., 2009, p. 708). As a result of the frustration, content area teachers may show resistance toward teaching reading in content areas and hold negative beliefs about utilizing content literacy strategies in their classrooms.

Instead, secondary teachers, often experts in their disciplines, must be the "professionals" of their fields and have pedagogical skills to provide deep learning through disciplinary interactions. Educators who understand the link between literacy in their discipline and the professional work in their field can focus their students on disciplinary literacy over superficial and generic reading skills (Lent, 2016).

It is especially difficult for secondary teachers to demonstrate a positive self-efficacy in literacy instruction when they have not been trained to use literacy strategies that support their discipline. In the Sargent and Farrell study of 153 secondary teachers, only 16% indicated a belief that they could impact their students' literacy growth (Sargentet. al, 2018). Additionally, Smith and Robinson (2020) studied content area teachers who were observed as disengaged during professional development struggle to implement a new district-mandated approach meant to increase content area literacy strategies in their classrooms. This led the researchers to make stronger connections between disciplines and content literacy for their teachers and to call for more time in collaboration with other teachers of their content area to navigate the integration of literacy strategies into their disciplines (Smith & Robinson, 2020). This work indicates that explicit support for both pre- and in-service teachers is needed to increase literacy and critical thinking (Sargent et. al, 2018).

Methodology

Participants

The participants in the current study were 28 secondary pre-service teachers enrolled in a content area reading course. They consisted of 10 males (36%)

and 18 females (64%) with an average age of 21 years. The majority of the participants in this study were seniors (50%) with 10 juniors (36%), and 4 sophomores (14%), majoring in various disciplines areas such as social sciences (49%), humanities (12%), engineering (9%), and science (30%). The composition of ethnicity of participants was 20 Caucasians (71%), 5 Hispanics (18%), 1 African Americans (4%), and 2 who reported two or more ethnicities (7%).

Context

The participants were enrolled in a semester-long content area reading course which was one of the required teacher education courses for candidates seeking a Texas secondary teacher certification. This course was designed for pre-service secondary teachers to learn to integrate literacy instruction into disciplinary areas and use pedagogical approaches as needed to teach their content. It also emphasizes the vast variety of contents, skills, and dispositions necessary to participate in the literacies students encounter in the world beyond school.

The secondary and all-level teacher candidates only take two education courses before student teaching, and one of them is this content area literacy course. Though they come together for this course as part of the requirements for certification to become secondary and all-level teachers, this secondary grouping is where the similarities end. To become certified to teach secondary or all-level contents, teacher candidates first get their degree in their content areas. These areas include: English, Spanish, math, life science, physics, chemistry, computer science, social studies, history, art, theater, music, physical education, special education, agriculture, and 4-8 generalists in education. This last group, 4-8 generalists in education, take a series of courses in one of these content areas and fewer education courses, but their degree is in the education field. Similarly, the special education majors earn a degree in education with a focus area in special education coursework.

Content Area Reading Course

The variety of content majors can present a particular challenge for a content area literacy course for several reasons. First, the teacher candidates in these programs come with a wide range of pedagogical training. All of the content degree departments offer a content area pedagogy course, but the students come to the content literacy course with a wide-range of skills that are generally demonstrated in their abilities to write lesson plans. Some departments such as music and PE make a considerable effort to teach their teacher candidates to develop lesson plans, but even these two content areas have a very wide range of expectations in these plans. While music students are taught to use modeling,

vocabulary strategies and write extensive lessons that include a clear gradual release of responsibility, PE teacher candidates write good but concise lessons with short micro lessons that lead to student movement. An emphasis on getting and keeping students moving is valued over skill-building. This pattern is consistent with the state teacher standards where movement is prioritized over performance (19 TAC Chapter 116B, 2020).

Some of the university content areas instructors use their content pedagogy courses to focus on additional content from the field over teaching content specific instructional approaches. A few teacher candidates come to the content area literacy course having never written a lesson plan. The uneven instruction across the secondary pre-service teachers' coursework demonstrates the incredible significance of content reading courses. It also begins to explain the variety of contents, skills, and dispositions toward taking a reading course. To this end, differentiation of materials, requirements, and instruction is necessary to advance the knowledge and skills of these teacher candidates in both content area literacy, general pedagogy, and instructional strategies that will support student learning when they become certified teachers. For this course, the first level of differentiation begins with the grouping. Teacher candidates are grouped by content area when possible, and they are instructed to work together on their planning like an instructional team of teachers in a school. In addition, each group meets in conferences with the instructor, so they can receive content literacy instruction that meets the needs of their content, and they can receive on-the-spot instructional support when gaps in knowledge are identified.

However, these various content area groups come to a content area literacy course with different beliefs, attitudes, and dispositions about their responsibility and desire to teach literacy strategies often wondering why they are required to take this course. In this study, we seek to identify patterns in these attitudes and beliefs by analyzing the responses of secondary and all-level teacher candidates in surveys that measure both their sense of self efficacy and their attitudes towards teaching literacy.

Instrument

The following two questionnaires were administered to secondary pre-service teachers enrolled in a content area reading course to collect the data: *Teachers' Sense of Efficacy Scale* (TSES) (Tschannen-Moran & Woolfolk Hoy, 2001) and *Scale to Measure Attitudes toward Teaching Reading in Content Classrooms* (Vaughan, 1977). The TSES long form has 24 statements and uses a 9-point Likert-scale of 1 (Nothing) to 9 (A Great Deal). It is designed to determine the level of teacher

efficacy in the following three areas: student engagement (8 Items: 1, 2, 4, 6, 9, 12, 14, & 22), instructional strategies (8 Items: 7, 10, 11, 17, 18, 20, 23, & 24), and classroom management (8 Items: 3, 5, 8, 13, 15, 16, 19, & 21). The TSES long form has been used frequently in research studies, and its validity and reliability has been reported with Cronbach's alpha from .90-92 (Tschannen-Moran & Woolfolk Hoy, 2001).

The second questionnaire, A *Scale to Measure Attitudes toward Teaching Reading in Content Classrooms,* was administered to measure teachers' attitudes toward teaching reading in content area classrooms. It has 15 items and uses a 7-point Likert-scale of 1 (strongly disagree) to 7 (strongly agree). The survey also included demographic questions.

Data Collection and Analysis

Data were collected from 28 secondary pre-service teachers using the Qualtrics survey website. A survey link was created and distributed via email to the students by the course instructors. The collected data were analyzed using the SPSS. Descriptive statistics (mean, standard deviations, & frequencies) were calculated for summarizing demographic information and describing participants' efficacy and attitudes. A Pearson *r* correlation coefficient was used to determine the relationship between participants' efficacy and attitudes. Lastly, an ANOVA was computed to determine if there was any difference in efficacy and attitudes by academic majors.

Findings

Teacher Self-efficacy

In response to the research question, "What is the secondary pre-service teachers' perceived sense of efficacy in teaching?", the data analysis revealed that the secondary pre-service teachers reported fairly high scores (*M*=7.16) on the TSES, indicating they displayed a high sense of efficacy and believed that they have the ability to engage students in learning, implement instructional strategies effectively, and get students to follow classroom rules.

To get a clearer sense of the secondary pre-service teachers' self-efficacy, Table 1 presents the mean scores and standard deviations of individual TSES items as well as rank of each item by mean scores. Among the three categories of efficacy, student engagement marked the highest mean scores (*M*=7.25) followed by instructional strategies (*M*=7.12) and classroom management (*M*=7.11), indicating the secondary pre-service teachers felt more confident about helping

TABLE 1
Descriptive Analyses of the Teachers' Sense of Efficacy Scale (TSES)

No	Item	*M*	SD	Rank
	Student Engagement	7.25	1.13	1
1	How much can you do to get through to the most difficult students?	7.08	1.17	18
2	How much can you do to help your students think critically?	7.69	1.07	4
4	How much can you do to motivate students who show low interest in school work?	7.62	1.64	7
6	How much can you do to get students to believe they can do well in school work?	7.92	1.30	3
9	How much can you do to help your students value learning?	7.31	1.35	11
12	How much can you do to foster student creativity?	7.69	1.20	4
14	How much can you do to improve the understanding of a student who is failing?	7.04	1.22	19
21	How well can you respond to defiant students?	6.88	1.40	21
	Instructional Strategies	7.12	1.12	2
7	How well can you respond to difficult questions from your students?	7.12	1.22	16
10	How much can you gauge student comprehension of what you have taught?	7.31	1.29	12
11	To what extent can you craft good questions for your students?	7.50	1.15	8
17	How much can you do to adjust your lessons to the proper level for individual students?	7.46	1.55	9
18	How much can you use a variety of assessment strategies?	6.73	1.48	23
20	To what extent can you provide an alternative explanation or example when students are confused?	7.65	1.04	6
23	How well can you implement alternative strategies in your classroom?	7.23	1.40	14
24	How well can you provide appropriate challenges for very capable students?	7.27	1.53	13
	Classroom Management	7.11	1.21	3
3	How much can you do to control disruptive behavior in the classroom?	7.19	1.62	15
5	To what extent can you make your expectations clear about student behavior?	8.15	1.06	1
8	How well can you establish routines to keep activities running smoothly?	7.96	1.09	2
13	How much can you do to get children to follow classroom rules?	7.12	1.48	17
15	How much can you do to calm a student who is disruptive or noisy?	6.69	1.43	24
16	How well can you establish a classroom management system with each group of students?	7.35	1.44	10
19	How well can you keep a few problem students from ruining an entire lesson?	6.81	1.64	22
22	How much can you assist families in helping their children do well in school?	7.04	1.60	20

students engage in learning and thinking than implementing instructional strategies and managing a classroom.

As shown in the table, among 24 items, 20 items fell within a high confidence range (above *M*=7.00), whereas four items fell below 7.0. The four highest reporting items included: Item #5, "To what extent can you make your expectations clear about student behavior?", marked the highest scores (*M*=8.15) followed by Item #8, "How well can you establish routines to keep activities running smoothly?" (M=7.96), Item #6, "How much can you do to get students to believe they can do well in school work?" (*M*=7.82), Item #2, "How much can you do to help your students think critically?" (*M*=7.69), and Item #12, "How much can you do to foster student creativity?" (*M*=7.69).

Among the four items that scored below 7.0, Item #15, "How much can you do to calm a student who is disruptive or noisy?", marked the lowest mean score (*M*=6.69) followed by Item #18 "How much can you use a variety of assessment strategies?" (*M*=6.73), Item #19, "How well can you keep a few problem students from ruining an entire lesson? (*M*=6.81), and Item #21, "How well can you respond to defiant students?" (*M*=6.88).

Attitudes toward Teaching Literacy

In response to the second research question, "What are the secondary pre-service teachers' attitudes towards teaching literacy in the content area classroom," the current study found that the participants reported somewhat positive attitudes toward teaching reading in content area classrooms (*M*=4.89). The mean scores indicated that the secondary pre-service teachers generally felt good about implementing content literacy strategies in their lessons and believed literacy strategies have a positive impact on students learning in content areas.

Table 2 shows the descriptive analyses of the attitudes survey and rank of individual items. Among the 15 items, only 4 items scored above 6.0 (Items 13, 2, 10, & 3). These statements include: Item #13, "Every content area teacher should teach students how to read material in his or her content specialty" marked the highest mean scores (*M*=6.39) followed by Item #2, "Technical vocabulary should be introduced to students in content classes before they meet those terms in a reading passage" (*M*=6.09), then Item #10, "A content area teacher should be responsible for helping students think on an interpretive level as well as a literal level when they read" (*M*=6.09), and finally Item #4, "Few students can learn all they need to know about how to read in six years of schooling" (*M*=6.0).

The participants reported low mean scores on three items (Items 7, 5, & 14). Among the three items were Item #14, "Reading instruction in

TABLE 2
Descriptive Analyses of Attitudes toward Teaching Reading in Content Classrooms

No	Item	*M*	SD	Rank
1	A content area teacher is obliged to help students improve their reading ability.	5.87	1.15	5
2	Technical vocabulary should be introduced to students in content classes before they meet those terms in a reading passage.	6.09	1.06	2
3	The primary responsibility of a content teacher should be to impart subject matter knowledge.	6.00	0.83	4
4	Few students can learn all they need to know about how to read in six years of schooling.	4.74	1.57	11
5	The sole responsibility for teaching students how to study should lie with reading teachers.	3.26	2.09	14
6	Knowing how to teach reading in content areas should be required for K-12 teaching certification.	5.39	1.21	9
7	Only English or Reading teachers should be responsible for teaching reading in K-12 classrooms.	3.96	1.90	13
8	A teacher who wants to improve students' interest in reading should show them that he or she likes to read.	5.74	1.39	6
9	Content teachers should teach content and leave reading instruction to reading teachers.	4.22	1.79	12
10	A content area teacher should be responsible for helping students think on an interpretive level as well as a literal level when they read.	6.09	0.88	2
11	Content area teachers should feel a greater responsibility to the content they teach than to any reading instruction they may be able to provide.	4.96	1.83	10
12	Content area teachers should help students learn to set purposes for reading.	5.61	1.05	7
13	Every content area teacher should teach students how to read material in his or her content specialty.	6.39	0.87	1
14	Reading instruction in K-12 content area classrooms is a waste of time.	2.30	1.90	15
15	Content area teachers should be familiar with theoretical concepts of the reading process.	5.61	1.17	8

K-12 content area classrooms is a waste of time" (*M*=2.30), marked the lowest mean scores followed by Item #5, "The sole responsibility for teaching students how to study should lie with reading teachers (*M*=3.26), and then Item #7, "Only English or Reading teachers should be responsible for teaching reading in K-12 classrooms" (*M*=3.96).

When students were asked how confident they were in implementing content literacy strategies in their classrooms, they reported that they were moderately confident (*M*=3.96) about teaching reading in a content area classroom.

The majority of participants (72%) believed that they were confident and very confident about integrating content literacy strategies into their instruction.

Relationships between Teacher Efficacy and Attitudes

In response to the third research question, "What is the relationship between secondary pre-service teachers' perceived sense of efficacy and their attitudes toward teaching literacy in the content areas, the Pearson r correlations revealed that there were no statistically significant correlations between the two variables (r=0.08). The regression analysis indicated that there was no effect of efficacy on attitudes $F(1, 27) = .81$), meaning that although the participants had confidence in their ability to influence students, their efficacy did not affect what they believed about teaching reading.

Academic Majors

The fourth research question asked if there are differences in secondary pre-service teachers' efficacy and attitudes by academic majors. To answer this question, the participants were grouped into two categories 1) education and literacy related majors and 2) non-education and literacy majors to determine the differences in teacher efficacy and attitude by academic majors. There were a total 9 education and literacy major students, including All-level Special Education, English

TABLE 3
T-test Results of Teacher Efficacy and Attitudes by Academic Major

Variables		Education Major (n=9)	Non-Education Major (n=19)	t	Sig.	Difference*
Student Engagement	M	7.72	7.03	1.56	0.13	—
	SD	0.93	1.17			
Instructional Strategies	M	7.64	6.88	1.75	0.09	Edu.> Non Edu.
	SD	1.05	1.09			
Classroom Management	M	7.32	7.01	0.63	0.53	—
	SD	1.39	1.17			
Teacher Efficacy (Total)	M	7.56	6.97	1.40	0.17	—
	SD	0.94	1.08			
Attitudes toward Teaching Reading	M	5.02	4.82	0.61	0.55	—
	SD	1.01	0.69			

*p<0.05 (Scheffé post-hoc test)

Language Arts (4-8), and Education. The 19 non-education students included all other majors: music, history, science, mathematics, kinesiology, and visual arts. As shown in Table 3, the mean scores of the two groups indicated that education and literacy major students reported higher scores on both teacher efficacy (*M*=7.56) and attitude (*M*=5.02) than did non-education or non-literacy major students (*M*=6.97; *M*=4.82). Among the three categories of efficacy (student engagement, instructional strategies, & classroom management), an independent *t*-test revealed that education and literacy major students reported greater confidence in using instructional strategies in their instruction than did non-education and literacy major students, *t*(26)=1.75, *p*= .09.

Discussion

Teacher Self-Efficacy

Previous research demonstrates that teachers with a high sense of efficacy tend to be more engaged in teaching and have a stronger influence on student success (Shu, 2022; Zee & Koomen, 2016). Understanding pre-service teachers' fears and concerns is necessary for teacher educators in their efforts to improve their efficacy and beliefs. This current study examined secondary pre-service teachers' sense of efficacy in teaching and attitudes toward teaching literacy in content areas. It also explored the relations between pre-service teachers' efficacy beliefs and their attitudes toward teaching content literacy.

The findings of this study indicated that the secondary pre-service teachers reported a high sense of efficacy and confidence in teaching. Among the three categories in efficacy beliefs (student engagement, instructional strategies, & classroom management), the participants of this study strongly believed that they could have students engage in learning by encouraging them to believe in themselves, fostering their creativity and critical thinking skills, and motivating them to learn. The pre-service teachers in this study also felt confident that they could provide appropriate instructional strategies to meet individual student's needs by adjusting their lessons, providing an alternative explanation or strategy, crafting good questions, using a variety of assessment strategies, and providing appropriate challenges.

Although classroom management was the area that the secondary pre-service teachers felt least confident about, there were a couple of areas where they were confident. They reported that they can make their expectations clear about student behavior and establish routines to keep classroom activities running smoothly. Even though the secondary pre-service teachers felt highly confident about setting the classroom rules and routines, they felt they would struggle in

managing classroom and behavioral issues such as calming disruptive students and controlling their disruptive behaviors during lessons, keeping problem students from ruining the lessons, and working with families.

Teacher Attitudes toward Teaching Literacy

The results of this study showed that secondary pre-service teachers reported somewhat positive attitudes and beliefs about teaching reading in their classrooms. For instance, they strongly agreed that content area teachers should be responsible for teaching reading and should share this responsibility with reading teachers although their primary responsibility should be teaching their content subject matter. They also believed that content area teachers should teach students to learn to read complex materials and help them improve general reading skills. Finally, they reported that it is important to front-load vocabulary before content lessons. These results are consistent with the goals of the content literacy course.

Although the current study revealed that there were not strong connections between teachers' efficacy beliefs and attitudes toward teaching literacy, research has reported the relation between teacher efficacy and teacher attitudes (Port et al., 2022; Yada et al., 2022;). The study with secondary pre-services teachers (Port et al., 2022) investigated the impact of teacher efficacy and attitudes toward the implementation of differentiated instruction and found teacher knowledge was a major factor influencing implementation rather than attitudes. Lastly, the current study also found that education and literacy majors felt more confident about teaching and more positive about teaching reading in their classroom than did students with non-education majors.

Implications

Based on the results, the current content literacy course will continue to emphasize the importance of content area teachers teaching disciplinary-specific literacy skills, and increase the emphasis on supporting disciplinary specific vocabulary. Additionally, because the students seem to be too confident in their ability to differentiate and implement content specific literacy instruction, a pre-course quiz may be added to the course with direct links to modules that emphasize these learning outcomes, so students are aware of weak areas that they need to address. A similar organizational structure would benefit in-service teachers as well as a pre-assessment that identifies areas to focus on during the in-service opportunity for both the learners and leaders.

Limitations

There are several limitations of this study. First, this is a study of pre-service teachers' self-efficacy and attitudes toward teaching reading in content areas. Second, the TSES and SORS are self-reported surveys and only bliefs are reported rather than what participants really believe and what strategies they think they use rather than what they really use. Third, the sample of study was small with only 28 participants. Finally, the context of this study was set in the authors' content area reading courses.

Conclusions

More research exploring the relationship between attitudes toward and the actual application of content area literacy strategies could clarify the power of belief or skills and teachers' both willingness and ability to implement these strategies. An assessment of how well a teacher knows how to differentiate for a content area compared to their perceived abilities and attitudes toward content area instruction could reveal a gap where teachers have good attitudes, but are not providing appropriate supports in their content area courses.

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WHEN PRE-SERVICE TEACHERS IDENTIFY READING AS WORK: IMPLICATIONS FROM A METAPHOR ANALYSIS

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Abstract

This study employs metaphor analysis methodology to examine how pre-service teachers perceive themselves as readers and conceptualize the reading act. Analysis revealed three complex conceptual metaphors: "reading is a commodity, "reading is a destination," and "reading is work." This manuscript addresses the "reading is work" metaphor and four types of stances within: job, avocation, vocation, and career. All readers in the "work" category regard reading as something important you do. "Job" readers frame reading as necessary but outside of their control and often joyless. "Avocation" readers see reading as pleasurable but (and perhaps because) separate from in school experiences. "Vocational" and "career" readers, with stronger agency and confidence tend to integrate purposes and show agency in growth. Analysis suggests pre-service teachers' identities as readers have roots in their K-12 experiences. Implications for teacher education, what and how we teach, are addressed.

Keywords: reading, teacher education, pre-service teachers, metaphor analysis, teacher as reader, teacher identity

Introduction

As teacher educators, we operate in a space between what our candidates bring from their experiences as students and how they will teach in their future. Having experienced at least fourteen years of formal education, these future teachers bring deep and complex background knowledge of content and pedagogy they use to make sense of what we offer. They long to replicate positive experiences that inspired them to teach, but are also motivated by their frustrations, failures, and boredom. Seeing education from the student angle only, so far, they are quick to assume that the way things were is the way things are. The teacher education program frequently disrupts what they assumed and assimilated as truth.

In over 60 years collectively as literacy teacher educators, we have learned we must help our teacher candidates develop as readers, in both skills and disposition, to effectively develop them as teachers of reading. We begin by learning who they are as readers. A reader autobiography assignment at the beginning of literacy education coursework, as well as conversations in and out of class, show us these future teachers often do not see themselves as readers. Many do not view reading as a pleasurable act, although they do see learning to read as critically important.

This research grew from our desire to understand our students' stances and experiences as readers so we might better support them as they grow into literacy educators. We asked ourselves, "How do pre-service teachers perceive themselves as readers and experience/conceptualize the act of reading?" The findings from this longitudinal study of 69 pre-service teachers' identities as readers offer implications for how we teach reading in K-12 schools as well as prepare future educators.

The Significance of Teachers as Readers

The reading practices of teachers and their identities as readers influences and affects the way they plan for and teach reading (Applegate & Applegate, 2004; Applegate et al, 2014; Kerkhoff et al., 2020). Teachers who are uninspired readers cannot give enthusiasm and passion for reading to their students if they do not have it themselves. Applegate and Applegate (2004) identified this as the Peter Effect. Conversely, teachers who regularly read for pleasure engage in a greater number of effective teaching and learning practices than those who do not (McKool & Gespass, 2009; Morrison et al., 1999). McKool and Gespass (2009) found that teacher readers allotted more time and space for independent reading. They recommended books to their students and incorporated connections to their own reading practices and strategies into their teaching. Teacher educators cannot

assume that pre-service teachers enjoy or like to read for pleasure. Therefore, our look at pre-service teachers' identities and stances as readers through the metaphors they use has implications for future student success.

Identity Matters

Our study is framed through identity theory. Reading identity is complex, including how we think about and use language, our social interactions with and through reading, and how we view ourselves as readers within society and culture. Gee (2001, 2015) differentiates between "discourse," language in use, and "Discourse," the combination of language and related social practices through which people enact and recognize various socially significant identities. As individuals are socialized into Discourses, they acquire cultural models, theories about what people within those Discourses normally do. These models influence identity development and actions and are reiterated in texts and practices, often at a tacit, unexamined level.

For the pre-service teachers in this study, reader identity intertwines with teacher identity, the previous perhaps more fully developed but the later more consciously developing. McCarthey and Moje (2002) suggest that literacy identity during adolescence is particularly dynamic as individuals move into new spaces with more autonomy and varied literacy forms and practices. Considering reader identity is particularly important for pre-service teachers negotiating the intersections of their reader identities, their growing knowledge of how reading works, and consideration of future teaching spaces.

Methodology

We approached our question through metaphor analysis, a methodology with roots in Lakoff and Johnson's (1980) work in Cognitive Metaphor Theory and nuanced through continuing scholarship about metaphors' significant role in how humans conceptualize their experiences (Siman et al., 2021). Lakoff and Johnson asserted that human use of metaphor, beyond a literary device, reflects the way we make sense of and experience the world. Because they map relationships between concepts, metaphors are central to cognition, tied to the neural structures of our brains (schema) in which we store and organize what we know and process new learning (Lakoff, 2014). When we communicate in metaphor—in language, through gestures, or in visual representations—we carry complex insights in compact containers. A conceptual metaphor is a word or group of words that refers to a complex domain of thought. The common conceptual metaphor "life is a journey" evokes a sense of moving through time (metaphor:

time is a conduit), with plans and expectations but also subject to the unknown and unexpected. We talk of life taking twists and turns, of geographical features like cliffs and mountains. The metaphor may connote purpose, hope, uncertainty, determination, agency, and vulnerability.

Thought domains are constructed of source and target (Kövecses, 2010). The familiar, easily recognized concept is the *source domain*. A source domain is usually concrete and easily relatable, like "journey" in the example above. The *target domain* is the more abstract or vague concept, like "life" in our example above. Mapping life and journey together brings us to understand the abstract concept of life in particular ways. Other source domains mapped to the same target can illuminate other aspects of the target (Gibbs, 2011). For example, "life is a garden" or "life is a game" reveal different understandings of the ways we think about our lives and, potentially, the actions we take.

The role metaphor plays in organizing thought gives it particular influence in use. Framing an argument metaphorically may strongly influence the ways we think about and take stances on that argument (Lakoff, 1996; Siman et al., 2021). However, in real world interactions, we do not just respond to the metaphor and the meaning domains they evoke but also bring our experiences to play in interpreting the metaphor. Examining the metaphors individuals use to describe experiences or beliefs may uncover meanings beneath those consciously shared (Moser, 2022), providing insights into individuals' beliefs and assumptions and how they may influence actions (Zheng & Song, 2010). Interrogating those metaphors in use, considering what they may reveal about attitudes and how they might influence actions, may inform the ways we approach a concept in order to influence thinking and action.

Context and Participants

The research was conducted at the large, midwestern public university where all three researchers are colleagues in the literacy education program. Participants in the study were undergraduate, pre-service teachers enrolled in a series of four literacy education courses required in the Elementary Education degree program. The courses, designed to be taken sequentially over the course of three semesters, addressed the following content:

- Children literature (CL), sophomore year;
- Teaching reading (TR; paired with a writing methods course); and
- Literacy assessment and instruction (LA&I)

Because we realized the importance of connecting students' early experiences to what they were learning in methods classes, instructors regularly began courses with engagements designed to activate students' thinking about their reading experiences. In conversation about strategies for doing so, one researcher said she asked students, at the beginning of the semester, to respond to the prompt, As a reader, I am a) a walker, b) a jogger, or c) a runner. She shared that she was a voracious reader, constantly reading everything around her and seeking more, so she classified herself as a runner. Another colleague, an experienced metaphor analysis researcher, pointed out that their responses were good data for considering what students' metaphor choices revealed about who they are as readers. This study was launched by that conversation.

A survey was given to students at the beginning of each semester, including an information questionnaire asking for basic demographic information (age, gender, ethnicity) and a brief statement of reading habits and preferences, and a metaphor questionnaire with a brief introduction to the metaphor concepts and one question: "As a reader, are you a walker, jogger, or runner? Explain why you selected that metaphor." Data were collected in 23 class sections over three full rotations, with 96 participants overall.

Data Analysis

Data analysis took place in four rounds (see Shaw et al., 2021, for a discussion of our collaborative metaphor analysis process.) Figure 1 offers an overview of the four-round analysis process. I think the terminal punctuation is supposed to be outside the parentheses in the sentence so it should end: process).

Round One: Unpack and Interpret

In round one, the researchers met weekly to unpack and identify conceptual metaphors in participants' responses to the prompt. We examined each response metaphor, one by one, considering at once the prompt selection (walker, jogger, or runner), the narrative explanation, and the tone of the response which we coded as positive, negative, or in-between. The interpretive work was richly

Figure 1 Analysis Process

collaborative. Individual researchers considered each metaphor, then brought their initial interpretations to the group where we debated and refined, seeking common ground.

As we analyzed the pre-service teachers' responses, we worked to refine our articulation of the conceptual metaphor. This process was vigorously interactive. Each potential conceptual metaphor was subjected to challenges by members of the research team, and proposed metaphors were continually connected back to the original student narrative to ensure coherence.

New instances that seemed to fit previously proposed conceptual metaphors were used to refine the articulation of that conceptual metaphor. In the first round of analysis, we identified and defined 27 conceptual metaphors for the data (Figure 2).

Round Two: Group Conceptual Metaphors

In round two, we worked to group the 27 conceptual metaphors into "buckets" (Armstrong, 2007), considering qualities they had in common that may connect them. Because the 27 conceptual metaphors were complex and varied, we found it useful to rephrase the target domain, "as a reader, I am" to "to this reader, reading is," in order to home in on commonalities. For example, "efficiency engineers," "seasonal workers," "specialists," and more were grouped into an avocation/vocation bucket as, for all, reading is something important they do.

As we worked, we found it helpful to "touch base" with the major conceptual categories identified by Lakoff and Johnson (1980): ontological, structural, and orientational. We considered how our buckets aligned conceptually and what considering their framing might help us understand about what we were seeing. As in round one, our process was collaborative and deliberate. At the end of round two analysis, the 27 conceptual metaphors from round one were distilled into five buckets (Figure 3).

Round Three: Refine for Coherence

The purpose of round three was to refine and group the conceptual buckets for coherence and significance to identify core course metaphors. We revisited each bucket, working to clearly articulate complexities and consider cogency. Each conceptual metaphor was tested against our articulation of the bucket conceptualization. If a metaphor in the bucket didn't seem to be an easy fit, we considered if it fit better in a different bucket or if we needed to expand or adjust the bucket conceptualization to fit the contents. We reconsidered how each metaphor in the buckets related to other groups, how Lakoff and Johnson's conceptual categories shed light on our interpretations, and how readers and the reading act were positioned in each. During this process, five categories were reduced to four: *a/vocation, destination, commodity, and container.*

CONCEPTUAL METAPHOR	Our Definition
DELIBERATORS	*Readers* who go slowly because they are really thinking about what they are reading, wanting to truly understand, take time; deliberator can be negative or positive.
STRUGGLERS	*Readers* who are reading and making it through reading tasks, but it's hard and they have to go slowly.
DETERMINED STRUGGLERS	*Readers* who find reading hard for them, but they are going to do it, by golly!
AVOIDERS	*Readers* who really don't want to do this (notes mainly a negative experience).
PLODDERS	*Readers* who do it but go about it slowly.; keep a steady pace, but it's heavy, labored.
A SPECIALIST	*Readers* who specialize in a certain kind of reading but isn't as proficient or enthusiastic with other types/genres of reading.
A MEANDERER	*Readers* who specialize in a certain kind of reading but isn't as proficient or enthusiastic with other types/genres.
A DEVOTEE OR FAN	*Readers* who enthusiastically pore over and soak up every detail.
FOX	*Readers* who follow an opportunity to chase something.
TRAIL HIKER	*Readers* who are excited, keep going at a steady pace, but can slow down when the terrain changes, taking in the scenery.
PACER	*Readers* who proceed through the task with no desire to smell the roses or see everything; like tortoise and hare.
ARCHEOLOGIST	*Readers* who take time to find something valuable and put all their energy into it.
SNACKER	*Readers* who read a little now and then; has to do with quantity.
CITY DRIVER	*Readers* who are going the right pace for the right conditions; they find the best route to get where they are going.
SEASONAL WORKER	*Readers* who read, read, read, then rest or take a break; can be a holiday reader.
HOBBYIST	*Readers* who read only in their spare time (perhaps connect to seasonal worker).
NOVICE	*Readers* who are just beginning and they are trying to stay in control.
HERD ANIMAL	*Readers* who all stay together with a group, being led into reading various things. (Faculty are border collie).
ASSEMBLY LINE WORKER	*Readers* who try to keep up and catch on (connects to factory mode of school).
SHOWER SINGER	*Readers* who won't read for anybody else; It's like they are safe to read in their place, but when they come out, they are in danger.
TIGHTROPE WALKER	*Readers* who straddle two things feeling tension; for example reading for school and reading for pleasure.
OLYMPIAN/TRIATHLETE	*Readers* who are knowledgeable and confident in their abilities.
EFFICIENCY ENGINEER	*Readers* who are box checkers; they get through tasks and are productive but have little joy in the experience.
SEEKER	*Readers* who are intentional and search for knowledge; they are hungry and eager.
SPRINTER	*Readers* who go 'all in' for a short period of time; intermittent reader.
VETERAN	*Readers* who identify as a reader like a veteran, not only has been but still is
COLLECTOR	Readers who pick up concepts and do it well.

Figure 2 Round One Conceptual Metaphors

Bucket	Metaphors	Description	Lakoff & Johnson
A/Vocation	Devotee, efficiency engineer, specialist, assembly line worker, shower singer, seasonal worker, hobbyist, expert/Olympian	Reading is something we do, it is important. We have different roles. Reading is an act we relate to in different ways. Attitudes and values are embedded here.	Structural
Locomotion	Avoider, tightrope walker, trail hiker, meanderer, [city] driver, plodder	Reading is a destination or a place to be navigated. We go to or move through it. How we locomote depends on our purpose and the conditions.	Orientational and structural
Growth	Teenager, plant	Reading is organic and developmental. The environment affects growth. Growth is expected pending the right conditions.	Orientation and structural
Consume	Snacker, epicurean	Reading is a commodity and is something that nourishes us. Metaphors show a relationship between reading/student.	Structural and ontological
Seeker	Strategist, collector, deliberator, treasure hunter, striver, archaeologist	Reading is a commodity or destination. It is something we strive for. There is a relationship between the reader and what s/he is seeking.	Structural and ontological

Figure 3 Round Two Category Buckets

As we worked in this stage, three dispositional aspects began to emerge as influential in reader's stances about and experiences with reading: agency, skill, and propensity. A reader's relationship with and attitude toward reading were influenced by how much agency they felt, the skills or level of skill they brought to the task, and how likely they were to engage in it.

Round Four: "Deep dive" Conceptualization

In round four, we worked to carefully articulate the characteristics of each conceptual metaphor bucket. We revisited every bucket, coding every metaphor within again as informed by the category framing, then looking for patterns pointing to salient themes. During this final intensive examination, the metaphors in the container bucket were reallocated as subsets of commodity and a/vocation. A/vocation was renamed as work (Reading is something important you do) with four subcategories addressing the nature of that work: job, avocation, vocation, and career. Finally, we stepped back one more time to carefully consider the roles readers' conceptualizations and experiences play in each.

Findings

This analysis of pre-service teachers' metaphors of reading revealed three cogent and complex conceptual metaphors: "reading is a commodity, "reading is a destination," and "reading is work." Each of these metaphors has implications for how pre-service teachers engage as readers themselves and, thus, how they are likely to approach reading as teachers. In this article, we focus on "reading is work," the most pervasive and one of the most complex of the metaphor categories.

Reading is Work

For readers whose metaphors situate them in this category, reading is something important you do. Analysis of their metaphors reveals that how and why they approach this work of reading and how they feel about it varies. We categorized four types of work: "job," "avocation," "vocation," and "career." To a large extent, readers' stances on the work of reading are influenced by their perceived skill, sense of agency, and their propensity for reading.

Reading is a Job

Metaphors used by readers in this category frame reading as something that is necessary and expected. Analysis patterns reveal a consistently low sense of agency for these readers. They don't have much say in how and why they read, but rather their reading choices and nature of reading engagements are mostly controlled by others. Job readers tend to focus on assignments and, with low to medium propensity, are less likely to choose to read beyond what they are asked to do than readers in other work categories. Metaphors for those with slightly higher propensity suggest more willingness to do what is asked of them. For this group, perceptions of reading skill were coded from low to adequate. A primary tension arises at the juncture of agency and skill, as meeting outside expectations may

frustrate if the perceived skill set is lacking for the task being asked. Examples of job metaphor explanations, with course identifiers (CL for Children's Literature, TR for Teaching Reading, and LA&I for Literacy Assessment and Instruction) and agency (A), skill (S), and propensity (P) codes, are as follows:

> …in Elementary school, I would read for special rewards in class instead of reading for fun. Now, as I grow older and am not offered a certain reading reward system I don't read very often only when I am required to in classes. I wish I could be like a "jogger" or a "runner" though. (walker, CL; low A, adequate S, low P)

> I rarely read for enjoyment, normally only if it's required for a class. When it comes to reading books I enjoy, I normally finish them quickly and then I'm done and won't read a book for another few months. It's hard for me to be interested in books as I have a very short attention span. (walker, CL; low ASP)

> Reading has never been something I've enjoyed doing and I'm not very confident when it comes to reading out. (walker, TR; low A, adequate S, low P)

> I still do not enjoy reading very much. Ever since third grade I lost my passion for reading. It's one of those things where if someone tells me to do it then I really don't want to do it. When I read, I read slow and pay attention to detail and I play it all out in my head to help me comprehend the story. Which makes me slower as a reader then I rush because I hate to make others wait on me. (walker, LA&I; low ASP)

This "job" reader, however, is agentive, but low perceived skill is hindering movement ahead.

> I have never been a very confident reader or have found great joy in reading but I am trying to teach myself to like it more. I try to read every morning for at least 15-20 minutes to start my day in a positive way but don't always reach that goal. I am currently reading the book… but I am a pretty slow reader. It takes a lot of effort for me to be able to read something or even just a few pages and to fully comprehend what I just read so I am working on that. I think that is the reason I don't love to read. (jogger, TR; high A, low S, medium P)

Analysis across the course rotation, from the sophomore-level Children's Literature (CL) class to the second-semester junior-level Literacy Assessment and Instruction (LA&I), does suggest a slight increase in agency, perhaps because the importance of choice for readers is a pedagogical concept addressed and modeled in the classes. In their explanations, LA&I readers often indicate growth in knowledge or appreciation of reading from their earlier semesters, for example:

> *I have really struggled with reading and comprehension my whole life. Reading is something that I really wish I was better at. I read when it is necessary but typically have to re-read to fully understand something. I have loved all of the children's literature pieces we have used and am eager to hopefully grow more interested in reading and reading practices. (walker, LA&I; medium A, low skill, medium P)*

> *I do not do it daily, but I read a new book every once in a while. My reading classes I have taken have made me want to read more and be more proactive about it. I read a semi-long book over break, which I haven't done in a long time, which I enjoyed and hope to make a habit out of it. (jogger, LA&I; medium ASP)*

Reading is an Avocation

For readers in this category, reading is done at will and outside of day-to-day expectations. They have a generally high level of propensity–they want to read and are likely to do so when they feel able. Choice drives them; they want to read what they want to read and often nothing else. Skill matters here, too. Most avocational readers' responses suggest an easiness with reading, but for a few, reading outside of requirements is a safer space from struggle. Time is a primary tension for these readers; thus, agency comes into play in an important way in relation to how they feel able to manage required tasks to allow time to do what they want. Included in this category are readers whose metaphors we initially coded as "seasonal worker," because they talk of reading voraciously during school breaks when they have more time.

> *I like to read when I have time to, but when I am in college I typically feel I don't have time. I love books that help me to understand the Bible, because that is something I'm very passionate about. I'm a slower reader, so it takes me awhile to finish a book. (walker, CL; medium A, adequate S, medium P)*

I love reading when it comes to a book that I want to read and usually not for a class. I enjoy reading under my own terms. The books I read are usually young adult and are not ones you read in class. (jogger, CL; high A, adequate S, high P)

Growing up reading stressed me out. I was nervous and felt unequipped to do so. Getting more into school I hated reading for class. Currently I have learned to appreciate reading more and more everyday. I read books that I get to choose, my favorites are fiction stories and/or autobiographies that can directly relate to the stage of life that I am in. I learned how to read for fun. (jogger, TR, high A, adequate S & P).

I enjoy reading for pleasure, but I don't have as much time to do it as I'd like. I like to read in the car when traveling, sometimes at night before bed or on lazy Saturday mornings. (jogger, LA&I; medium A, adequate S, high P).

Across all three major metaphor categories in this study, "reading is work", "reading is a commodity," and "reading is a destination," the idea that school is an interrupter for reading is present (see "job" quote above and discussion). It is particularly strong for avocation readers who often mention their history as readers who loved to read before school requirements began to prevent or discourage them from doing so.

I love to read but I only do it when there's time for it. Since getting into high school, I had a lot of homework and classwork so I didn't read much. When I got to college, all I had time to read was required reading. However, every summer when I didn't have class, I could read up to a book a day. When given the time and resources, reading is one of my favorite hobbies. (jogger, TR; low A (must be given time/resources), adequate S, medium to high P (if given resources))

Reading is a Vocation

Like those in the "job," category, these readers frame reading as a regular job but one they value and enjoy. Occurring only in the last two classes, and with some rarity (only three in each semester), vocation readers show a growing sense of agency and confidence in skill. Reading is not just a job, but rather important work, and it's work they are determined to do well. Across the board, their metaphors suggest medium to high agency, skill, and propensity.

> *I go through stages of these metaphors. In high school I was a runner and lived to read all the time, throughout college I have been a walker and barely ever read unless needed or assigned. Now since we have been in quarantine I have picked up reading again but not quite a runner yet. I am not currently reading a book but I plan to start again once I get a good routine down this semester. I am aiming to be a runner again because I do love reading. (jogger, LA&I; high ASP)*

Reading is a Career

A few readers, one in children's literature and two each in the other two courses, actively worked toward continuing success as readers, with an eye to taking on leadership. Confident in skill, with awareness they have worked hard for that skill, career readers seek high levels of agency. Readers in this group referred to educational experiences and referenced mentoring that contributed to their growth.

> *I have improved a lot with fluency and extending my vocabulary by reading more. I have also increased my comprehension. The reason I believe that I am a runner is because I work with children every summer and I am able to help increase their literacy from my own personal practice. (runner, TR; high A, adequate S, high P)*

Work Metaphors Across Semesters

Of the three metaphor categories, "reading is work" was the most populated and, within that, job the most frequent stance. Though there was some movement between categories across semesters, the job percentages in "reading as work," those who as a group suggested lower agency, confidence in skill, and propensity to engage in reading, held steadily at about 60% of students each semester. This percentage is similar to Applegate and colleagues' (2014) finding that over half of 400 pre-service teachers they studied were categorized as unenthusiastic readers. Vocation readers, the next highest category, dropped steadily over the three courses, from 36% of the work group in the first course, to 28% in the second, and finally to 23%. The more confident and agentive workers, vocational and career, remained a small contingency but showed slight growth from only one career reader in the children's literature semester (no vocational), to three vocational and two career readers in each of the following semesters. As Figure 3 shows, percentages of students conceptualizing reading as work dipped steadily across the semesters while we saw a slight rise in those who saw reading as a commodity.
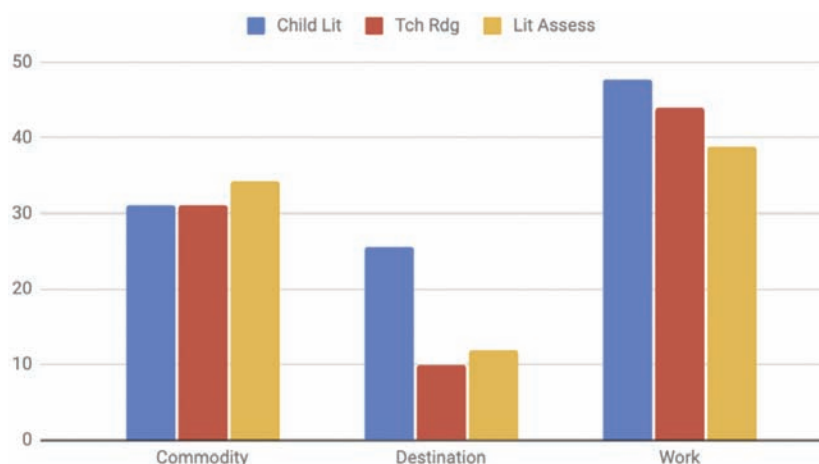
Figure 3 Shifts Across Semesters

Discussion and Implications

What does it mean for pre-service teachers to view reading as a work? Metaphors produced by most readers in this category suggest they see reading as simply a job, something that needs to be done but is largely outside of their own agency and control. Without agency and control, job readers may illustrate what Applegate and Applegate (2004) describe as the Peter Effect. When the apostle Peter was approached by a beggar asking for money, he replied, "I cannot give what I do not have." Likewise, job readers cannot give book recommendations, share their reading lives, or inspire readers through their own joy of reading, if they do not have it. They "show up for the job," one that is managed for them. They may enjoy that job. They may endure it. But they have little say in how it happens. Job readers, then, are less likely to be active vigorous readers themselves and, as teachers, perhaps more likely to "settle" for or unquestioningly follow curriculum materials that are handed to them. Pedagogy that centers task assignment and completion may make sense to them.

Of course, positive experiences "on the job" may encourage readers to develop their skills and take on more responsibility, perhaps moving toward a more integrated vocational or career stance. In our classrooms, these readers need support for developing their own skills and strategies at the same time they learn to do so for others. They need choice in what they read and opportunities to engage in dialogue about reading that helps them understand the interpretive and critical nature of reading, learning to trust their voices beyond "getting the right answer." Knowing this charges us as teacher educators to not only teach

the processes and strategies for effective literacy instruction, but also to provide spaces for choice and dialogues within our courses. We must encourage them with book recommendations and demonstrate how to integrate high-quality books across the curriculum.

Readers who see reading as avocational, as a hobby, consider reading as a good thing to do. However, their depictions range from mildly pleasurable to a very few who are passionate. As teachers, they may share a sense of value and joy with their students, but they may also be likely to separate teaching of reading from actual reading, sidelining books as extracurricular. Their habit of reading strictly on the sidelines is less likely to influence their growing insights into teaching reading and more likely to be abandoned to scholarly and social demands of university life. These readers would benefit from learning to teach effectively with real books and authentic reading engagements. A strong focus on strategy instruction through mentor texts, including how to select texts to fit varied readers, may help ensure they center real reading in their own teaching.

Vocational and career stance readers not only find "reading as work" generally pleasurable but connect it with real world purposes. As such, they may be more likely to effectively integrate and support a comprehensive reading experience in their own classrooms. As teacher candidates, they are likely positioned as interested and purposeful learners. Supporting them in maintaining a strong "so what" stance as they learn, taking on critical stances and perspectives, may go a long way toward honing their confidence and leadership abilities so they are positioned to influence decisions and practices in their future workspaces.

Analysis suggests pre-service teachers' identities as readers have strong roots in their previous school experiences. As they explain their metaphors, these future teachers tell their histories as reading learners. Job readers frequently note reading difficulties and attendant negative classroom experiences. Applegate et al. (2014) describes this type of reader as unenthusiastic students who "complete their assigned readings and duly received their grades and degrees, but they emerge from their educational experiences with their distaste for and avoidance of reading relatively untouched." (p. 189–190). Avocational readers are more likely to recall books they've liked and enjoyable family experiences but also to note junctures in schooling when pleasurable reading experiences were sidelined. Vocational and career readers evoke positive instructional experiences such as mentors and episodes that confirmed they were good at reading. Almost all vocational and career readers note time as the primary factor in their relationship to reading, as reading competes with other engagements for available time, and to refer to times in their learning histories when reading as pleasure left the curriculum, regulated to space outside of the classroom.

In short, what happens to readers in schools influences their reading lives profoundly. School as a "reading interrupter," a strong thread throughout the findings, is something we need to consider carefully as we teach people to teach reading. As teacher educators, we operate at a juncture between their previous experiences and the reading teachers they will be.

Using metaphors to uncover pre-service teachers' stances on reading adds depth to the existing scholarship on teachers as readers and how that influences classroom practice as well as answering the call for continued research (Nathanson et al., 2008). Like others, we recognize the connection of pre-service teachers' school experiences and their beliefs about reading (Draper et al., 2000; Nathanson et al., 2008; Roe & Vukelich, 1998). Enthusiastic teacher readers often credit teachers for igniting their passion for reading (Nathanson et al., 2008). When influential teachers model their reading lives, sharing favorite books and how reading enhances their lives, they positively influence their students' reading lives and create engaged readers (Gomez, 2005; Miller, 2009). Because we cannot assume that pre-service teachers enjoy or like to read for pleasure, we, as teacher educators, must model our reading lives and encourage pre-service teachers to read not only professionally, but also personally. We need to make space in our courses for book talks and book shares, and we need to help them see their reading identities as influences on their future students (Gomez, 2005; Powell-Brown, 2003-2004).

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COLLABORATIVE PROJECT-BASED LEARNING AS A TOOL FOR CO-CONSTRUCTING MEANING

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Abstract

Reading for information in print or digital form can poses challenges. Learners need to adeptly move between modes of text, selecting and summarizing important ideas to be shared with others. Information overload can grip readers. Collaborative project-based learning provides opportunities for learners to co-construct meaning and synthesize information into a group project. This paper explores the perceptions of graduate teacher education students, teachers, and children toward collaborative projects and shares ideas for designing collaborative project based learning (PBL) for learning together and emphasizing individual voice and accountability.

Keywords: Project-based learning, teacher education, collaborative projects

Introduction

Reading for information, in print or digital form, plays an integral role in the ways people answer life questions and solve problems, big and small. It's imperative for today's learners to adeptly move between modes of text, as information is encountered in print and digital books, websites, images, podcasts, and videos. In a world where unlimited amounts of information are at our fingertips, locating, evaluating, synthesizing, and sharing information from multimodal texts is key to being information literate (Coiro & Dobler, 2007; Dobler, 2022). Yet making sense of vast amounts of information from varied information sources can

be a challenge, especially in a digital world where users hold the responsibility of locating useful and accurate information from a trusted source and recognizing overtly bias, fake, and false information (Nash, 2021; Pilgrim & Vasinda, 2021).

Project-based learning (PBL) engages learners in real-world, complex tasks centered around their curiosities about topics in their world and often connects to content-area standards. PBL focuses on three specific elements: 1) a guiding question, which propels and organizes the learning process; 2) the creation of a project or artifact to represent new learning; 3) sharing the project with others (Krauss & Boss, 2013). Project-based learning can lead to positive attitudes about learning (Bender, 2012), promote collaboration (Markula & Askela, 2022), self-directed learning (English & Kitsantas, 2013), and may be linked to increased academic achievement (Chen & Yang, 2019; Kokotsaki et al., 2016). More specifically, in a research study of social studies instruction with second graders, an experimental group using project-based learning was compared to a control group using traditional methods. The PBL group showed higher growth in social studies and informational reading (Duke et al., 2021). In a similar study related to science education, third graders who participated in a PBL science intervention had higher scores on a science standardized assessment (Krajcik et al., 2022).

A collaborative inquiry project centers around students working together to ask and answer a guiding question by reading, understanding, and using information gathered from books, websites, articles, videos, and experiences. Co-construction of meaning can occur when learners read and work together to negotiate the challenges of critically consuming and producing print and digital resources. Reading comprehension skills are put into action by working together to:

- activate and build background knowledge,
- separate fact from fiction, especially in online texts (blogs, articles, websites),
- discuss unfamiliar vocabulary,
- identify important details in a text,
- make notes of information to remember,
- synthesize information into a project.

The give-and-take by talking through ideas and making meaning together lets learners process and consolidate their thinking, thus building content knowledge (Cabell & Hwang, 2020) and engagement (Hruby et al., 2016), both of which are key factors in reading comprehension (Duke et al., 2021).

Making meaning and creating a project through a joint effort is based on the sociocultural view of learning as a way of connecting with each other and the belief that "we learn largely in order to understand the social world, to enable our interaction with others, and to show others that we have learned" (Duke et al., 2021, p. 3). Social and cultural contexts influence our learning and drive us to seek and process information for sharing with others (National Academies of Sciences, Engineering, and Medicine, 2018).

Collaboration is often a key feature of project-based learning as learners "work together, autonomously and purposefully, toward the completion of a project" (Chen & Yang, 2019, p. 72). Collaborative learning differs from cooperative learning, although both formats may utilize groups of two to six learners. Cooperative learning focuses on learners completing separate tasks that are combined into a finished product, much like an assembly line, speeding up a process that might typically be done by a single person (Johnson & Johnson, 1999). Collaborative learning shares the process of knowledge creation among the group by combining efforts to synthesize information into a new understanding through discussing, listening, and accommodating others' perspectives (Kozar, 2010).

When collaborating on a project, learners may share a device (co-use) to search for information, read together, and jointly complete a notetaking guide, or they may harvest information individually and come together for a discussion before creating a project that reflects their collective learning. Collaborative project-based learning can promote effective print and digital reading strategies in important ways, such as:

- solving problems and responding to a challenge based on information gained from resources (Darling-Hammond, 2008; Markula & Aksela, 2022),
- promoting autonomy among learners, along with learning from and with others (Payne et al., 2006; Ulsa & Durak, 2022),
- co-constructing knowledge based on text and experiences (Cabrell & Hhwang, 2020; Thomas, 2000),
- designing driving questions that express students' voice and creativity (Krajkic & Shin, 2014),
- improving critical thinking during lateral reading among and between web-based resources (Walsh-Moorman et al., 2020).
- posing questions and participating in text-centered conversations (Baye et al., 2018; Sasson, 2018),

- cultivating deep learning and engagement with the texts, the topic (Miller & Krajkic, 2019),
- testing ideas, leading to innovation (Guo et al., 2020).

Learners can become co-constructors of meaning, often gaining a deeper understanding, unique perspectives, and the use of additional strategies for online reading (Coiro et al., 2019), such as how to use the search feature within a website or where to find information about the author's credibility. Through reflection before, during, and/or after the project, a teacher can build in opportunities for learners to recognize how their beliefs, cultures, and experiences influence their reading and learning process (Nash, 2021). This awareness may lead to an openness to others' ideas, a sense of belonging, and more effective collaboration.

Challenges When Working Together

Issues can arise when constructing meaning together, as each learner may approach a learning task in a different way using more effective and, at times, less effective strategies. The ways people prefer to process information can vary from talking through ideas, to making notes, to drawing sketches. Some learners process information quickly and jump right into a learning activity, while others hold back, preferring to take more time to think through the information. These differences may be so pronounced a group could struggle to move forward, which can make for lost learning time and frustration. In fact, left to their own devices, a group's result may be less than the sum of individual efforts (Ingram et al., 2009).

In a successfully functioning group, teammates contribute ideas equally, do an equal share of the work, and receive similar benefits from the learning. In addition, the group's collective thinking and each individual's thinking is "valued, visible, and actively promoted as part of the regular day-to-day experience of all group members" (Ritchhart, 2015, p. 3). Adult learners often have anecdotal evidence of times when individual effort and engagement was anything but valued or equal. Group members of all ages may face similar challenges when collaborating on a project.

Social loafing, also known as free riding, is the tendency of learners to put forth less effort when being judged or graded as a group with the hope of benefitting from the work of others (Aggarwal & O'Brien, 2008). One social loafer can affect the dynamics and engagement of the entire team, causing negative emotions and disengagement among group members (Pietarinen et al., 2018). A learner may choose not to participate fully because of a lack of

confidence in their knowledge and skills, a preference to work alone, or a belief their efforts do not matter. Social loafing can be reduced by teaching students to be aware of group dynamics and how to express their learning needs and also integrating peer assessment of group members' efforts (Lin, 2018).

Production blocking occurs when a person blocks or inhibits the ideas of others during a brainstorming session or work time. Being closed-minded may cause withdrawal by some, promote conflict, or spread an unfriendly tone, all of which can break down trust among group members, and make it difficult to move forward.

Coordination loss refers to the additional effort required to coordinate a collaborative project, as opposed to working independently. Coordination loss can impede learning by using time that could be devoted to project work as group members sort out who does what by when and make efforts to hold each other accountable (Bacon, 2005).

In addition, collaborative learning activities used in a school setting may inevitably lead to questions of fair ways to assess learning and assign grades. Giving a single grade to all group members can be seen as unfair, undermine motivation and violate individual accountability. "The group grade breaks the one-to-one connection between what one does and the grade one receives" (Kagan, 1995, p. 70).

Educators can balance the benefits and drawbacks of collaborative projects by keeping the focus on students' comprehension within and across digital and print texts and using the information to answer questions and solve problems. Collaborative learning can be enhanced when tasks involve group goals and individual accountability (Slavin, 1988) and when teachers watch for problem-solving issues while students are collaborating and intervene when necessary (Van de Pol et al., 2015). By being intentional when designing collaborative projects, educators can reduce social loafing and other challenges. Intentional decisions could include:

- establishing clear participation expectations,
- keeping the scope of the project small and well-defined, so learners can give more focused attention to the project,
- designing project elements that are doable in the time frame of the project,
- creating clear criteria for assessment of the process and project (Krauss & Boss, 2013).

Aim for between two and six learners for the group size, which is large enough to provide for a variety of perspectives, but small enough to hold each group member accountable (Aggarwal & O'Brien, 2008). Avoid forming groups randomly, rather construct groups based on learners' profiles or have students self-select, which may increase group identity and thus engagement (Payne et al., 2006; Ulsa & Durak, 2022). Develop multifaceted assessment that recognizes both quality of the project and individual effort, possibly through peer evaluations (Lin, 2018).

Study Rationale

Project-based learning aligns with my professional beliefs about effective teaching and learning. I have worked to implement PBL in my teaching throughout my career. As a former elementary teacher and a current university instructor, I have also faced the challenges of using collaborative learning activities, while recognizing the benefits for learners. When working with children, I merely had to say the words "group project" and the focus turned away from learning toward the social aspect of identifying a partner. When I mention group projects with adult learners, it seems to bring about a range of emotions from cringing and dread to eagerness and increased engagement. As an instructor, I wanted to learn more about how I can make collaborative learning more effective in my teaching. Also, project-based learning is an initiative within our state, so I also wanted to gain information I could share with pre-service and in-service teachers to enhance their implementation of collaborative project-based learning. Action research was the selected research model for this study. Action research is defined as "an approach to investigation that uses continuing cycles of observation, reflection, and action to reveal solutions to issues and problems experienced by people in their everyday lives" (Stringer, 2020, p. 1). My intent with this project was to seek a solution to the challenges of collaborative meaning–making and bring about change to my own teaching. This research was guided by the following questions:

- *What are qualities of effective collaborative meaning–making when used as an element of project-based learning?*
- *What are concerns students express with collaborative project-based learning?*
- *What intentional decisions about project design can address students' concerns?*
- *What are ways to assess individual progress within a collaborative learning project?*

Methodology

To answer my questions about collaborative learning, I found it important to learn from educators and their experiences as both students and teachers, as these experiences may have guided their implementation of project-based learning. In addition, I chose to gather data from children in the classrooms of these teachers, to understand how these students experienced collaborative learning. For this study I did not distinguish between online and in-person collaborative learning experiences. Data were collected shortly prior to the pandemic and during the pandemic. Data reflect traditional in-person, hybrid, and online learning settings.

Educators' Perspective

I began by exploring the experiences and views of practicing teachers who were also students in the graduate online teacher education program in which I teach. Graduate students were invited to participate after completion of courses and my submission of grades. Thirty-nine graduate students responded to data source A, an online questionnaire. The questions focused on a general impression of collaborative project-based learning from their own experiences as children in K-12 settings, as well as adults in undergraduate, and/or graduate settings. Additional questions aimed at identifying effective and ineffective collaborative learning practices, including the assessment of group projects. Ninety percent (35) of the respondents had taught using collaborative project-based learning, thus were invited to respond to questions from the teacher perspective by completing data source B.

Thirty-five teacher participants shared their views and experiences in data source B, based on their use of collaborative project-based learning in their own teaching. Sixty-two percent of these respondents taught 2nd - 6th grade, with the remaining representing Kindergarten, middle school, and high school. Participants were asked to identify impressions of using collaborative project-based learning in their teaching, along with effective practices and challenges with assessing learning through a collaboratively-created project.

The 35 participants were invited to participate in data sources C and D. Data source C collected children's impressions of collaborative project-based learning and is described in the upcoming section. Data source D asked teachers to review the anonymous feedback from their students and rate each comment as to the likelihood the feedback would be used to influence their teaching with collaborative project-based learning. The intent of this data source was to sift out the most useful children's feedback. Two teachers of the four teachers from data source C completed data source D.

Children's Perspective

Teacher participants for data source B (35 teacher participants) were invited to seek their students' views about collaborative learning through data source C, an online questionnaire for children. Four teachers elected to participate, representing 4th, 5th, and 6th (middle school) grades, and 160 children responded to the questionnaire. The children were asked about their views on collaborative project-based learning, along with positive and challenging aspects of working together to create a group project.

Data Analysis

Because the study was exploratory in nature, a qualitative data analysis approach was used with the four data sources. For data sources A (graduate students), B (teachers), and C (children) and D (teachers rating of children's feedback) data were first given a collective review to gain a global idea of the insights provided by the participants as a whole (Tesch, 1990). A second review of these data focused on identifying emerging themes and patterns related to opportunities and challenges with collaborative projects. For the third review of the data, I separated the data by participant groups and looked for trends among the groups and whether these led to an adjustment or addition of patterns and themes (Fook, 2002). In addition, twenty-three pre-service teachers in a senior-level undergraduate language arts methods course provided member checking by working in teams of four to analyze the children's qualitative response data and identify emerging themes. We discussed these themes as a class, and I compared these with my own findings and made adjustments.

Findings

All participants were asked an initial question about their view of learning with collaborative inquiry projects. Data from the three participant perspectives, children, teacher, and graduate student, show 46% of the 4th-6th grade children selected the option that working on a collaborative project was *kind of good, but not always*. Eighty six percent of the teachers and 56% of the graduate students expressed a similar response of mixed feelings toward using collaborative projects in their teaching and their learning. The effectiveness of collaborative group projects had mixed results for these participants, yet a sociocultural view supports human connectedness as a foundation for learning (National Academy of Sciences, Engineering, & Medicine, 2018).

Educators can support collaborative meaning making by providing scaffolds or structures for collaborative projects to ensure more student success.

Analysis of the data led to the description of seven scaffolds for supporting successful collaborative project-based learning.

Explicitly Teach the Benefits of Collaborative Meaning–Making

Working together to comprehend print and digital resources for a project can lead to a deeper understanding as learners pool their background knowledge and vocabulary understanding and learn from each other's experiences with accessing and gaining an understanding of print and web resources (Miller & Krajkic, 2019). Educators can explain that building this deeper understanding is a reason why collaboration is integrated into learning activities. In this study, child participants frequently described collaborative inquiry as fun and "a chance to work with my friends". While the adult learners often described collaborative projects as stressful, partly because "it's difficult to schedule work times together" and mentioned a benefit as getting a project finished more quickly. Deepening their understanding by reading, talking, and thinking together was not expressed as a positive aspect of collaboration. By sharing reasons for co-constructing meaning through collaboration, teachers can begin to create a culture of collaboration in the classroom.

Set Out Clear Expectations

When the expectations are clear and the activity is focused on making meaning that can lead to a tangible product that addresses a driving question, learners can give their attention to deepening their understanding. Social loafing, and the resulting negative emotions, can be reduced when the expectations are clear, learners feel connected to the project, and are thus better able to regulate their learning processes and emotions about collaborating (Törmänen et al., 2021). A child participant commented, "[With collaborative projects] we get to compare our ideas to make the best one possible. We get to socialize and see how people have different ideas". One teacher participant involved students in creating a list of expectations at the onset of a project-based learning unit, which gives students agency and ownership over their learning process.

Create Opportunities for Collaborative Goal Setting

Students can help set the individual and group goals for collaborative project-based learning and identify observable behaviors that let everyone know whether the goals have been met. By making goals of the activity to deepen their understanding and learn to work together, students come to realize the task is not to

just complete a project. Teacher participants described setting goals that may be academic or social/emotional in nature, such as completing part of the project by a date or having a group discussion about a text or video where participants hold a talking stick when speaking to ensure turn-taking. With a goal of collaborative decision-making, children can learn to be flexible and work with others, an important lesson for one child participant who responded, "sometimes they don't agree with you, and you can't do it your way".

Organize the Process into Manageable Chunks

Breaking up projects into doable tasks can help keep students focused and give a variety of options for ways to be actively involved and contribute to the group's goal (Heeb et al., 2021). Some teachers reported having assigned jobs or roles for students within the group as a scaffold for dividing the project into smaller portions and ensuring each group member has a task. Several teachers asked collaborative groups to use a work plan or timeline created by the teacher, the students, or the teacher and students together, before embarking on the project work. One teacher gave groups "detailed instructions or a numbered list and setting a timer, so they do not spend their whole time deciding what to create". Other teachers described reviewing the plan with the group and setting up checkpoints for each group to revisit their plan and collectively assess their progress, then make adjustments if needed. Creating the project on a shared digital document lets group members see each other's progress and begin to understand how the pieces lead to a collective understanding.

Build in Multiple Assessment Points

Collaborative projects need multiple assessment points so the teacher can take into account the multi-faceted nature of working together (van Leeuwen & Janssen, 2019). Data from all three participant groups suggested the importance of creating clear assessment criteria and assessing progress along the way to emphasize the process, rather than only assessing the finished product. As one teacher explained, "watching the process is just as important as the final product", and another stated, "students can make corrections and ask for clarification while they work". Clear assessment criteria sets students up for success. One teacher stated "I create the rubric beforehand based on the standards and what I want students to demonstrate. Once that is done, I can build group work around it. If I do it the other way around, it's harder to grade as individuals". Without clear criteria, "people can start arguing about what they should do, and if one person does really bad, the entire group gets a bad grade" (child participant). Using multiple checkpoints takes a snapshot throughout the process as a record of progress.

During analysis of the data, an assessment option emerged based on feedback from all three participant groups, graduate students, teachers, and their students: assess some project elements individually and some elements for the group as a whole. As one child participant stated, "you can split the project into how many kids there are and have everyone work on their part so if they don't do their part they get graded down and not the whole group". A teacher suggested the importance of sharing the criteria, in the form of a rubric, with students "upfront so they know what is expected and can ask questions".

Several teacher participants advocated for some form of self and peer evaluation, often at more than one checkpoint, so a teacher can provide individual feedback to students who may not be fully participating. For individual assessment, teachers also reported using oral presentations, exit tickets, student-created videos, writing, and individual and group conferences.

Encourage Communication and Accountability

Accountability was revealed as a priority for teachers and children. Student data frequently mentioned fairness as important, along with the desire to know the teacher recognizes their effort and contribution to the project. Student participants were in 4th, 5th, and 6th grades, and even at this age expressed strong opinions about fairness with such comments as:

- "Make sure EVERYONE is helping. People who don't do anything should not get credit."
- "If someone is not doing anything they get a lower grade."
- "Grade off of which kids worked and which kids didn't."

To solve this issue of accountability, one child suggested, "maybe give each person half and half. One half is for how he/she did by themselves, and the other half is for the entire team effort". Another student felt the teacher should, "give points for staying on task and not interrupting the entire class".

Giving students accountability within collaborative project-based learning can lead to ownership and autonomy in learning (Payne et al., 2006; Ulsa & Durak, 2022). From a teacher's perspective, "there are times when students need to work independently and times where it may be better to work with a partner or a small group. I believe there needs to be differentiation within grading to ensure every student is getting the grade that he or she earned. If the teacher has a reason to back up each decision it should end up being fair".

The teacher's role become one of observer and supporter during collaborative work time, but they may need to step in when a group struggles to function

(Van de Pol, 2015). Teachers in the study described using a project contract to provide clear expectations for participation and consequences for social loafing, which came across as a common concern among the student and teacher participants. A contract may include a clause that if the behavior and work expectations are not met, mediation can occur, with the teacher or other school personnel serving as the mediator. If an impasse is reached, a group member may be asked to leave the group and work alone. In addition, rather than relying totally on a grade, group members can sign a project contract at the beginning of their work together. If the contract is broken, then the member must leave the group and work alone.

Plan for Reflection on What, Why, and How

Providing time to reflect during and after the project lets learners know of the value placed on the collaborative learning process. Collectively or individually, reflections can focus on successes and challenges with the project or group dynamics. Reflection can lead to: 1) processing feelings about working with others; 2) recognizing how depth of knowledge has changed; 3) identifying effective/ineffective practices for next time; 4) becoming comfortable with continually reflecting (Darling-Hammond, 2008; Minstrell et al., 2011). While reflection may come after the fact, teachers can also be intentional about preparing students before the group project begins by discussing project expectations or the socioemotional aspects of collaborative work, such as personality differences and how these can affect group dynamics. One child suggested, "your partners might want to do something that you don't want to do, so you're a little mad about that. Your partners can also kind-of exclude you sometimes and make you do all the boring work, which they get to do all the fun work". A written reflection or a brief video recording on the Flipgrid app could provide a safe space to work through the feelings brought up by this situation. Through well-crafted reflection prompts provided by the teacher, learners can be guided to consider their progress and set goals for their future learning.

Limitations of the Study

While this study focused on collaborative project-based learning, collaboration is not always a feature of project-based learning. Definitions of PBL vary, as well as teachers' understanding and use of the term collaboration. These varying interpretations may have influenced the participants' view. In addition, because this study was exploratory in nature, methodology did not account for differences among graduate students', teachers', and children's PBL experiences in the classroom.

Conclusion

Collaborative meaning–making, as a part of project-based learning, gives learners the chance to work together to deepen their understanding of various information sources. "True collaboration is recursive. It involves team members whose abilities and skills complement each other as well as build on each other in order to realize a shared goal or solve a shared problem" (Yuen et al., 2014, p. 39). A classroom built around the adage "we can all learn from each other" is a learning environment that values diversity and makes belonging a priority. Issues surround collaborative group work, including learner engagement, fairness, and assessment. Learners and teachers can work together to be explicit about the positives of co-constructing meaning, to create clear expectations, make the project manageable, set learning and social goals, create multiple assessment points, encourage accountability, and reflect on learning.

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ELEVATING CREATIVITY AND COMPLEXITY IN LITERACY PROGRAMS

MAKING ROOM FOR COMPLEXITY: THE CONSTRAINTS OF STANDARDIZATION ON CLASSROOM, CAMPUS, AND DISTRICT SYSTEMS

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Abstract

Complex learning happens through supporting inquiry and innovation, not through standardized control that constrains. However, national and international assessment of students are used in (re)structuring the educational priorities and policies that guide national educational systems. This paper is based off of a qualitative dissertation study that explored how mandated high-stakes testing influences educators within a complex educational system in Texas. At each level within the system—the classroom, campus, and district levels—participants described the ways they perceive these influences and constraints on their decisions related to eighth-grade reading curriculum and instruction within their system. Using thematic analysis and complex adaptive system frameworks, the patterns at each level were mapped to identify tensions within and between these nested complex systems. Findings indicate a strong push towards standardization, and adaptive action is discussed as a way to identify and respond to this standardization.

Keywords: Complex adaptive systems model, adolescent literacy, inquiry, standardization

Introduction

Assessment of students and educational institutions has been an important part of structuring priorities in the field of education for several decades (Grek, 2010). This focus on standardized assessments has created what Davis and Vehabovic (2017) call becoming *testwise*. Such test-centric instruction does not actually improve the literacy skills of the students; it only improves their ability to take the literacy test (Davis & Vehabovic, 2017; Davis & Willson, 2015; Jennings & Bearak, 2014). However, a growing body of research (see Cilliers, 2000; Dooley, 2008; Jörg, 2017; Sumara, 2000; Waltuck, 2012) is defining contemporary learning as complex, innovative, purposeful, and uncertain (McDaniel, 2007; Ng, 2014). Testwise instruction that constrains a student's ability to learn and innovate is no longer meeting the needs of twenty-first century students.

There is already a strong body of research (Afflerbach, 2016; Au, 2007; Calfee & Hiebert, 1991; Davis & Vehabovic, 2017) that identifies test-centric practice in literacy fields. Current research on test-centric instruction tends to assume a simple, linear connection between curriculum, instruction, and assessment (see Holcombe, et al, 2013; Jennings & Bearak, 2014, Koretz, 2003, 2005; Popham, 2004); however, this study is based on the belief that teaching and learning are complex. Of particular importance to this study are the semi-autonomous agents that generate patterns of behavior within a complex system. This implies that there are many agents, both human and otherwise, that contribute in unpredictable ways to the learning environment. This study focuses specifically on the human element of these complex systems and how assessments affect the very human practice of teaching and learning.

This study was guided by the following question: How do a classroom teacher, a campus administrator, and a district curriculum director within this complex school system perceive these influences of state-mandated assessment on their decisions related to eighth-grade reading curriculum and instruction?

Theoretical Framework

Complexity theory "represents a range of theoretical insights" (Sumara, 2000, p. 268) that question linear assumptions of research that have been used for many years. I used Human Systems Dynamics (HSD) as the complexity framework for this study because it takes into consideration how "people take intentional action to influence patterns" (Eoyang, 2010, p. 3) within a system. Specifically, HSD focuses on the underlying dynamics that generate emergent patterns in complex, adaptive social systems "to explain how those patterns work and how they can be influenced *to bring about change*" [emphasis mine] (Robertson &

Patterson, 2016, p. 3). More than other complexity theories, HSD allows for the specific humanizing ways that individuals can and do affect the systems they inhabit. Specifically, I used three different frameworks from HSD to conceptualize and analyze the data from this study: the complex adaptive systems model, the learning landscapes model, and the adaptive action model.

The Complex Adaptive Systems Model

Accordingly, the HSD complex adaptive systems framework (Eoyang, 2002, 2005, 2010) is useful for studying curricular and instructional decisions in schools because they are systems "made up of individual agents that interact in interdependent ways such that they create system-wide patterns. Those patterns subsequently influence the behaviors of the agents" (HSD, 2021, p. 4). In this model, various agents (human and otherwise) interact within their system. This interaction then generates system-wide patterns of organization and behavior which in turn supports or constrains future engagements. For example, in a classroom system, the teacher, students, room layout, curriculum requirements, and the culture of the school are all agents that create tensions and pressures. How these agents navigate those tensions creates patterns of behavior that can either constrain or support generative learning. This system of pattern generation is recursive and perpetual. Figure 1 illustrates the relationship between agents, tensions, and patterns within a system.

Educational systems are made up of several "nested and overlapping complex adaptive systems" (Patterson & Holladay, 2018, p. 17). Semi-autonomous agents at each level work in dynamic ways to generate patterns of behavior for the whole system. As with the previous example, the culture of the school campus is a pattern of behavior, but it also affects the patterns of the classrooms within and the district without. Because this study sought to identify patterns of influence within and across various levels—namely the classroom, the campus, and the district—it was important that the theoretical framework address these scaled and nested systems. The HSD concept of nested complex systems addresses patterns in "the whole, the part, and the greater whole" (Eoyang, 2010, p. 5). This nested view of complex systems can be seen in Figure 2.

The Learning Landscapes Model

HSD also offers the Landscape Diagram as a tool to help practitioners to visualize the tensions in the system and how particular actions might shape existing patterns or generate new patterns at a particular level of the system. The landscape diagram (HSD, 2016) helps to identify the tension(s) between different agents
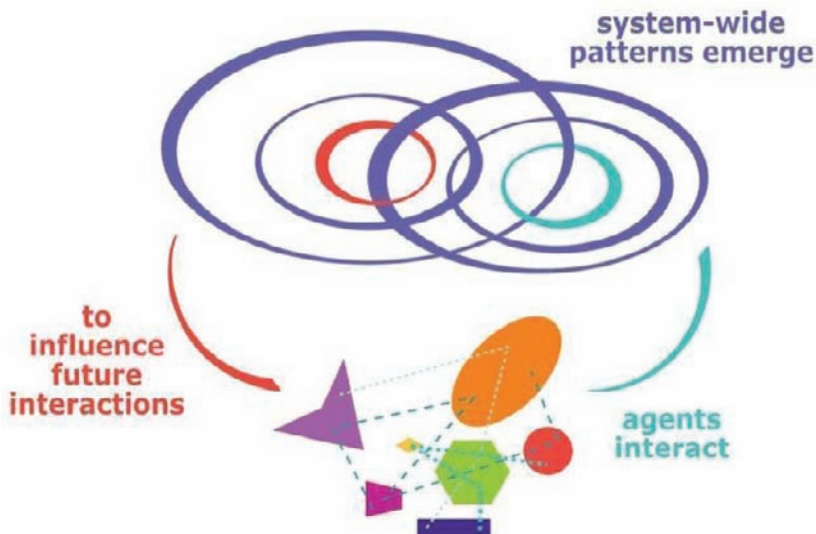
Figure 1   Complex Adaptive Systems in HSD
Note: From Patterson & Holladay, 2018. Used with permission.
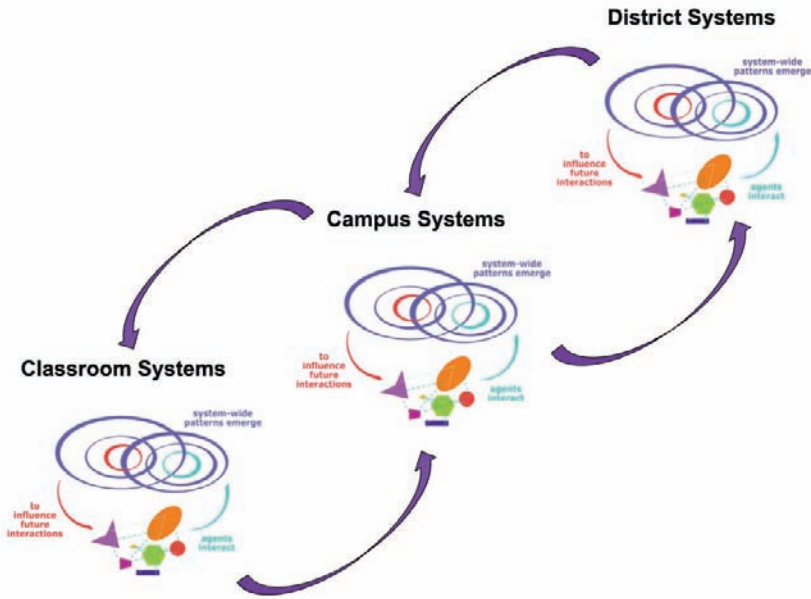
Figure 2   Nested Complex Adaptive Systems
Note: Based on Patterson & Holladay, 2018. Used with permission.

and ideas within a complex system as shown in Figure 3. The landscape diagram identifies the relationship between Agreement and Certainty in any situation. In this model, *Agreement* is how often (or not) agents within the system see and respond to situations in a similar way. *Certainty* in this model represents how predictable (or not) a course of action might be. Situations that might be high in both Agreement and Certainty are tightly constrained and standardized. Situations that are low in both Agreement and Certainty are loosely constrained and chaotic. Situations that are a balance of Agreement and Certainty are generative and emergent. This means that the tensions are tight enough to be constrained, but those constraints are loose enough that new and robust patterns might emerge.

The three zones in the landscape depend on the situation. For example, in the tightly- to-loosely constrained practices in mathematics, a student might be expected to memorize their multiplication facts for one situation while also being expected to develop creative algorithms in another situation. Neither tightly or loosely constrained option is inherently correct or incorrect, but they can be more or less fit for their function. As such, it depends on the specifics of the situation and the patterns generated. The purpose of the learning landscape is to identify if tensions within a system are appropriate for the goals of that system.
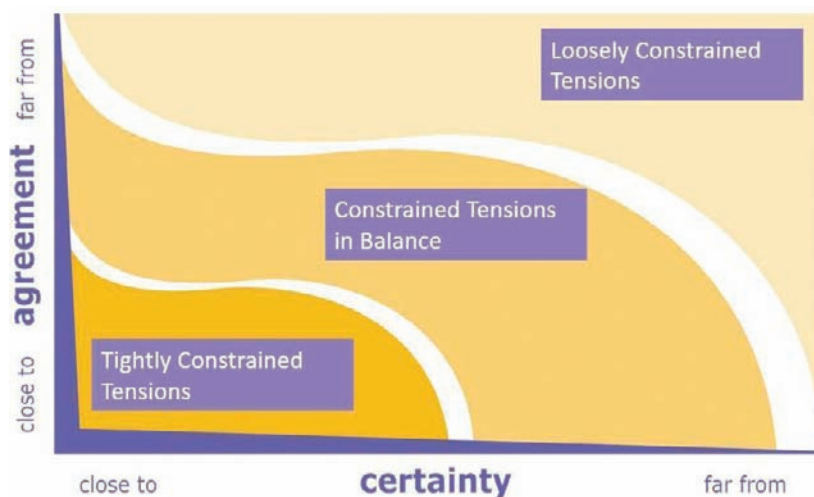
Figure 3 Learning Landscape
Note: Based on the work of Patterson & Holladay, 2018. Used with permission.

The Adaptive Action Model

The Learning Landscape model is a tool to help practitioners to visualize the tensions in the system and how particular actions might shape existing patterns or generate new patterns. The process of recognizing patterns in a complex system and making decisions to affect future patterns is called *Adaptive Action* (Eoyang & Holladay, 2013; Patterson et al., 2012; Patterson & Holladay, 2018). Adaptive Action (AA) is guided by three questions—*what is happening? so what does that mean? now what shall we do about it?* Within a CAS, AA recognizes making the best decision depends on "whether the decision fits the situation" (Patterson & Holladay, 2018, p. 6) in the Learning Landscape and is the best choice to shape the emerging patterns.

Literature Review

This study sought to consider this existing research as interdependent agents that might affect how educators throughout the district perceive state mandated assessments. This includes the history and policies of literacy assessments; curricular decisions and the role of educational leaders; and the attributes of adolescent readers.

The History and Policies of Literacy Assessments

Early literacy assessments in the twentieth century were founded on behaviorist positivism, which states that knowledge is only something attained through sensory experiences (Caldwell, 2013; Van Aalsvoort, 2007; Dantley, 2002). Positivist ontologies are more consistent with a mechanical view of systems rather than a natural or complex view; these views were the dominant educational theories well into the early twenty-first century (Tracey & Morrow, 2017) even as early norm-referenced tests that focused on reading rate and recall (Barry, 1998; Scammacca et al., 2016) began to shift to criterion referenced tests (CRT). These assessments determined mastery against an established criterion, and Popham and Husek (1969) note that instructional objectives become a part of the assessment, and these are often absolute. Skills are either mastered or not. Both norm and criterion referenced assessments are still used today.

Literacy Assessment in the twenty-first century are characterized by the educational policies that directed and supported them—most notably the update of IDEA in 2004 (Scammacca et al., 2016), the updates of ESEA in 2002 and 2016 (USDE, 2020a; USDE 2020b), and the National Reading Panel (NRP, 2000a; NRP, 2000b). Although less rote than earlier literacy assessments, these contemporary assessments maintain the positivist approach to standardization

and mechanical assessments. Many of these twenty-first century policies like No Child Left Behind (NCLB) and Every Student Succeeds Act (ESSA) are reifying the linear approach to teaching and learning established in the twentieth century. To a certain extent, this makes sense because the current educational laws and policies are based on previous behaviorist and positivist approaches to education rather than a contemporary understanding of education as a complex adaptive system.

Curricular Decisions and the Role of Educational Leaders

This focus on ESAs as a key agent in curricular decisions indicates a shift away from thinking about teaching as "no less cognitively *complex* than medicine" (Leeshulman.net, 2019, emphasis mine). Prior research into the cognitive complexity of curricular and instructional decisions (NIE, 1975) starts with two basic assumptions: Teaching is a complex process, and educators are rational professionals whose beliefs direct their decisions in complex and uncertain environments (Shavelson & Stern, 1981; Siuty et al., 2018). Within a testcentric environment, the *cognitive complexity* of decision-making that Shulman (1986) described is only partially represented–usually under the heading of differentiated instruction.

Instructional leaders regularly expect differentiated instruction in the classroom because classrooms are increasingly made up of students with a variety of backgrounds, socio-cultural attributes, languages, and learning needs (Goddard et al., 2019; Nordlund, 2003; Tomlinson, 1995; Tomlinson et al., 2003). However, several studies have indicated that educational leaders, specifically principals, only spent 8-19% of their time on instructional leadership (see Camburn, et al., 2010; Grissom et al., 2013; Lee & Hallinger, 2010). The majority of their time is spent on administration of managerial procedures and project management (Neumerksi, 2012; Oplatka, 2020). This focus on efficiency in data collection and usage harkens back to positivistic and behaviorist ontologies of the last century (Starch, 1915; Thorndike, 1934; Tracey & Morrow, 2017). Indeed, the mechanical approach to education has become exactly that—mechanical.

The Attributes of Adolescent Readers

It is also important to recognize that the needs and attributes of students also influence how classroom decisions are made. Adolescence is a complex time in youth development with the multifaceted and integrated growth of the body, mind, and society (Blakemore & Frith, 2005; Smetana et al., 2006). This complexity of person supports the need for integrated and complex teaching strategies (Compton-Lily, 2017; Robinson, 2017).

One such strategy is to engage adolescents in the act of reading (Alvermann et al., 2013; Guthrie, 2004; Guthrie & Wigfield, 2000; Lau, 2009) through use of student choice and incorporating Young Adult (YA) fiction into the English, Language-Arts and reading (ELAR) classroom (Hayan et al., 2011; Ivey, 2017; Johnston & Ivey, 2013). YA texts tend to include common components of personal inquiry, choice, diversity, motivation, and personal growth (Glaus, 2014; Hopper, 2006; Soloway et al., 1996; Great Schools Partnership, 2014; Savery, 2015). In fact, the adolescent characters in YA texts "act with agency and independence" (Silva & Savitz, 2019, p. 5) in a way that reflects the autonomy and maturity of their intended adolescent readers (Hopper, 2006; Silva & Savitz, 2019). This adolescent autonomy should be considered when identifying tensions in the system.

Methodology

The qualitative approach to this single case study (Merriam, 1988; Stake, 1995) was intended to go beyond the positivistic meaning of numbers and test scores to identify the cultural and systemic agents that influenced educator decisions (Alexander, 2006; Scanlan, 2010; Yin, 2014). This was intentional as to differentiate this study from the current body of research. Indeed, the use of a case study was not intended to develop a universal understanding that is generalizable, but rather it is to identify concrete, context-dependent information (Flyvberg, 2016) based on the tensions within one specific system. Additionally, Susan Morrow (2005) notes that qualitative studies are ideographic, where trustworthiness and credibility are developed through the individual participants and the theoretical approach to the study.

Participants

Since the school system in question was a key factor in the study, particular care was used in identifying an appropriate district to participate. (All names are pseudonyms.) Greenline Independent School District (GISD) is a mid-sized district in Texas that is average according to state standards of demographics, testing results, and overall enrollment. Within GISD, I centered on Treble Junior High, and I deliberately chose three participants (Table 1) who are representative of different levels during the 2019-2020 school year. All three participants gave specific and highly detailed responses about the work that they do in interviews during or shortly after the spring 2020 semester.

TABLE 1
Participant Descriptions

Participant (pseudonym)	Job Role	Background
Ms. Pond	Classroom English Teacher	• 2 years teaching 8th grade ELA at Treble • 2 years of experience teaching other subjects in neighboring districts
Ms. Benton	Campus Assistant Principal- in charge of the English department	• Over 20 years of experience in various roles • Content focus on social studies and health • First year as an administrator
Dr. Oswald	Executive Director for Curriculum and Instruction for Greenline ISD	• 30 years of experience in various administrative roles • Started career as a science teacher • First year at GISD

Data Collection and Analysis

Pertinent artifacts relating to instructional decisions were collected (Table 2) throughout the study to help clarify formalized expectations for curricular and instructional decisions. I also conducted semi-structured individual interviews (Bryman, 2016) with all participants about how and why they make curricular decisions. I used interview questions to solicit personal responses through examples and stories that give thick, emic details of the work that the participants do. This allowed me to further question participant beliefs, actions, and interpretations about what curriculum, instruction, and assessment look like in practice.

All interviews were transcribed and analyzed using a combination of thematic analysis (Braun & Clark, 2006) and frameworks from Human System Dynamics (HSD) (Eoyang, 2005; Patterson, Holladay, and Eoyang, 2012) in analyzing patterns and themes. This was purposeful as both analytical approaches focus on emerging themes and patterns within the data (Strauss & Corbin, 1998; Thomas, 2006). I focused on Ryan and Bernard's (2003) identifiers when making initial coding: repetitions, indigenous categories or phrases, similarities and differences, and system-based materials. This process was recursive throughout the data collection and analysis. As themes started to develop, codes were consolidated or changed.

Then to further analyze the data, I mapped identified themes onto the complex adaptive systems (CAS) theoretical framework. While the themes and patterns that emerged did so across all three levels of the school district, the

TABLE 2
Artifact Names and Descriptions

Artifact Name	Artifact Type
TEKS- RS Eighth-grade ELAR Instructional Focus Document	TEKS-RS Curriculum Document
TEKS-RS Year at a Glance (YAG)	TEKS-RS Curriculum Document
ELAR Secondary GISD Pacing Guide 6th-8th	GISD Curriculum Policy Document
2019-2020 Secondary Assessment Calendar: 6th-12th Grade All Content Areas	GISD Curriculum Policy Document
8th Grade RE District Common Assessment (DCA)	GISD Created Practice Assessment
2019-2020 GISD Weekly Lesson Plan Template	GISD Curriculum Policy Document
2019-2020 GISD Principal DCA Data Dig Form	GISD Curriculum Policy Document
My Perspectives: English Language Arts 8, Student Edition Textbook	Textbook

particulars at each system level more specifically address the guiding research question for this study. These patterns became the named themes. I identified the agents, interactions, and patterns from each of the nested systems and sorted them to more clearly see how these themes emerged at each level.

Finally, I built trustworthiness and credibility into this study through triangulation of data as well as member and peer review of interview transcripts (Golafshani2003; Lincoln & Guba, 1985, Merriam, 2002).

Delimitations

As with other qualitative case studies, this work does not attempt to generalize to other complex systems but rather to achieve transferability and dependability through internal checks of quality. Where these areas are weakest, are delineated here. Some areas of data sufficiency are weak due to the COVID-19 early quarantine, which started in the early stages of the study. There were no longer physical classrooms or weekly PLC meetings to observe since GISD completed the semester virtually. Using only interview transcripts and document review limits this study to the perceptions of the participants, and in few cases these were perceptions of planning and decisions these educators made over the past school year.

Findings

The first stage of analysis identified common themes and patterns within and among each level of GISD's system. The following interdependent themes and subthemes listed in Table 4 emerged from the participants' perceptions across the data set from all three levels of the system. I mapped these themes onto the specific system level as a secondary analysis step. This helps to identify how these patterns affected the complex adaptive system and the overall learning landscape.

Mapping the Classroom System

Classroom Agents

At the classroom system level (Figure 4), Ms. Pond is only one of several agents. Research in educational leadership supports a distributed network where several instructional leaders work together to support teaching and learning (Neumerski, 2012; Spillane & Diamond, 2007; Spillane et al.,, 2003). Specifically, Ms. Pond mentioned the other educators within GISD whom she worked with throughout the school year: her eighth-grade ELAR team members, Ms. Benton and the campus principal, and G.A., the curriculum coordinator. She also mentioned several inanimate agents such as documents, resources, and policies that she worked with, such as the new textbook, the TEKS-RS documents, the district DCA testing calendar, and the GISD lesson plan template. The state testing requirements for eighth-grade reading also factored into this system (TEA, 2018, 2019, 2020a, 2020b). Although not directly addressed, the history of state testing made-up part of this system. According to Patterson and Holladay (2018), these norms establish themselves from patterns of behavior and belief repeated over time. At the classroom level, Ms. Pond mentioned and

TABLE 4
Overview of Themes

Themes	Subthemes
Teaching and Learning as a Business	Compliance Production Quality Control
Narrowing Curriculum to Products and Programs	Skill focus Disconnected curriculum Test preparation.
Defining Success as Passing the Test	Student success Teacher success

Patterns:
- Self-organized roles within the PLC
- Incorporating TEKS-RS into daily lesson
- Compliance to disaggregated curriculum and skill-based data-digs
- Focus on student success on Performance Assessments, DCA, and STAAR exams.

system-wide patterns emerge

These patterns are interdependent and they influence subsequent interactions.

to influence future interactions

agents interact

Interactions:
- PLC Collaboration with lesson plans
- Guiding curriculum documents for planning and skill focus
- Compliance checking & test score review from campus admin
- Belief in skill-focused teaching and testing

Agents:
- 8th grade ELAR team
- Campus administration
- Curriculum Coordinator
- TEKS-RS documents

- GISD Lesson plan template
- GISD testing calendar
- STAAR requirements & previous test scores

Figure 4 Ms. Pond-Classroom level CAS

often implied that standardized testing such as the STAAR and skill-focused curriculum like TEKS-RS were the norm. She said "my understanding is that [Dr. Oswald] said that. 'Okay, we're going to use this particular pacing guide' and then our secondary ELAR coordinator … brought it down to us." Similar preferences for tested skills and objectives have been noted in several studies (Au, 2007; Holcombe et al., 2013; Jennings & Bearat, 2014; Koretz, 2005).

Classroom Interactions

Both Ms. Pond and Ms. Benton mentioned that the eighth-grade ELAR teachers worked well together and were often in collaboration. The different experiences that each brought to the PLC influenced how their lesson plans were developed, with one teacher focusing on TEKS breakdown, one focusing on the performance assessments, and one writing the daily lessons (Borko & Shavelson, 1990; NIE, 1975; Ormond, 2017; Shavelson & Stern, 1981; Siuty et al., 2018). Ms. Benton's influence on the classroom system level was minimal, centered on support and compliance checking. This is in line with research that indicates most instructional leaders are only able to spend a small portion of their time working toward better teaching and learning (see Camburn et al., 2010; Grissom et al., 2013; Lee & Hallinger, 2010). As such, the policy documents and curricular requirements via TEKS-RS were much more influential. Ms. Pond said, "I knew if we followed the IFD [Instructional Focus Document], and we did the performance assessments in the IFD in the number of days that we had for the unit" the unit and lessons would work

according to the pacing guide and testing window. The teachers used these curriculum documents in conjunction with the lesson plan template and the GISD testing calendar to drive most of their curricular decisions (Shavelson & Stern, 1981; Siuty et al., 2018; TEA, 2020b). This, in conjunction with the belief that skill-focused lessons and testing were the norm, developed most of the patterns of behavior at the classroom level system.

Classroom Patterns

In response to state mandated testing, classroom agents generated several patterns of behavior. Compliance to a disconnected, skill focused curriculum was a rote response to the normative belief that TEKS-RS and the STAAR exams are essential elements of curriculum. Accordingly, the disaggregated skills within the TEKS-RS helped Ms. Pond and her team identify where lesson plans and explicit skill instruction were successful, and these plans were regularly subjected to quality control. This is particularly in connection to student performance on assessments-including Performance Assessments, DCAs, or the STAAR exam.

The theme of *Teaching and Learning as a Business* emerged as Ms. Pond focused on complying with the TEKS-RS and DCA constrictions that predetermined what students (and therefore their teachers) produced and what level of quality those productions should have. Approaching teaching and learning as a business also strongly supported the second theme of *Narrowing Curriculum to Products and Programs*. Ms. Pond's compliance to the managerial approach to teaching required that she narrow her curricular choices to TEKS-specific lessons that were largely disconnected from other literacy skills and content areas. This narrowed curriculum also made it easier for Ms. Pond to focus on test preparation, which ended up being a key support for the third theme of *Defining Success as Passing the Test*. Ms. Pond used DCA test results almost entirely to determine the success of both her lessons and her students.

Mapping the Campus System

Campus Agents

Ms. Benton and the agents, interactions, and patterns of the campus level system are represented in Figure 5 and further explained in this section. She mentioned the other educators within GISD who she worked with throughout the school year: classroom teachers (including the eighth-grade ELAR team members), the campus principal, and various members of the C&I department. She also mentioned several inanimate agents namely, the district DCA and benchmark
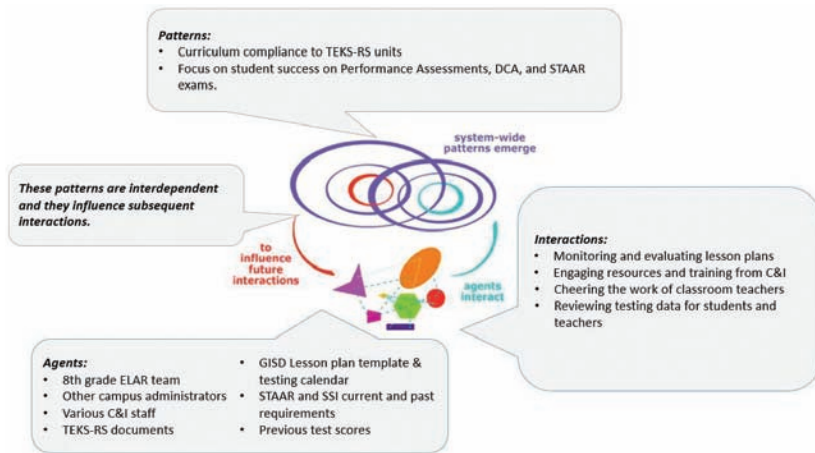
Figure 5 Ms. Benton-Campus Administration Level CAS

testing calendar, the GISD lesson plan template, and data analysis forms. She also mentioned the use of TEKS-RS as a foundational document that supports the others. Ms. Benton explained that "We're going to have some specific things for expectations, just like we do for their PLC time" including documentation of their "data digs" regarding common TEKS-RS units and assessments. Again, the state testing requirements—especially the high stakes reading STAAR exam for eighth-grade—also factored into this system. (AERA, 2000; Au, 2007; Davis & Willson, 2015; Holcombe et al., 2013; Jennings & Bearat, 2014; TEA, 2019, 2020). As with the classroom system, the history and norms of state testing also made-up part of this system.

Campus Interactions

Ms. Benton interacted with the policies of her campus and district more than any of the other agents within this leveled system. A large component of her job was to monitor lesson plans and test scores. She and Ms. Pond both noted that the administration was not often a part of the grade-level PLC meetings, and Ms. Benton also noted that she was not always available for the data-dig meetings the teachers held with the campus principal. Most of her personal interactions with the ELAR team was in a supportive, cheerleader role. She said "My role really honestly was more of 'what do you need?' you know, 'how can I help support you?'" because the curricular requirements were covered in the TEKS-RS documents. Her work was evaluative for progress on assessments and managerial to ensure compliance to those curricular policies.

Campus Patterns

Responding to the influence of state-mandated testing, agents at this system level developed patterns of curricular compliance and deficit views of student success. She was always alert for students that were not passing the DCAs or benchmarks so that she could apply intervention programs to improve their testing outcomes. Although Ms. Benton was not able to work directly with the ELAR teachers during their PLC time, her role was to ensure that the lessons they created supported student scores on the DCA and benchmark assessments. Regarding testing data, she stated that "the DCA form, the data dig form, they [teachers] turned into [the administration]." The combination of the TEKS-RS requirements with the DCA testing cycle created a pattern of looking at test scores to determine what teachers, students, or skills were still in need of intervention before the formal STAAR exam in late spring.

The theme of *Teaching and Learning as a Business* emerged as Ms. Benton focused on and enforced compliance with the TEKS-RS and DCA constrictions that predetermined what type of lessons the eighth-grade ELAR team produced. Her role in monitoring teacher lesson plans was to ensure both compliance and to act as quality control. This limitation of her role also supported the second theme of *Narrowing Curriculum to Products and Programs.* Because she was not familiar with the curricular needs of literacy instruction, Ms. Benton defaulted to checking compliance, which meant assuring the TEKS were addressed according to the TEKS-RS and DCA documents. As with Ms. Pond, this close connection between the assigned skills and their assessment supported test preparation and the third theme of *Defining Success as Passing the Test.* More specifically, Ms. Benton used the DCA and STAAR scores to determine which students and teachers were not successful and therefore in need of intervention resources.

Mapping the District System

District Agents

As the focus moved further away from direct student interaction, the people involved at the district system tended to be groups of agents rather than individuals (Figure 6). At the C&I system level, Dr. Osborn interacted with the following groups of agents: curriculum staff, including content coordinators, instructional coaches, and directors of special programs; campus principals, and the GISD school board. As with the classroom and campus system levels, policies, documents, and resources were active agents in this system. The state testing mandates, including the Student Success Initiative (SSI), and the requirements of local school board governance were particularly influential agents at this level (TEA,
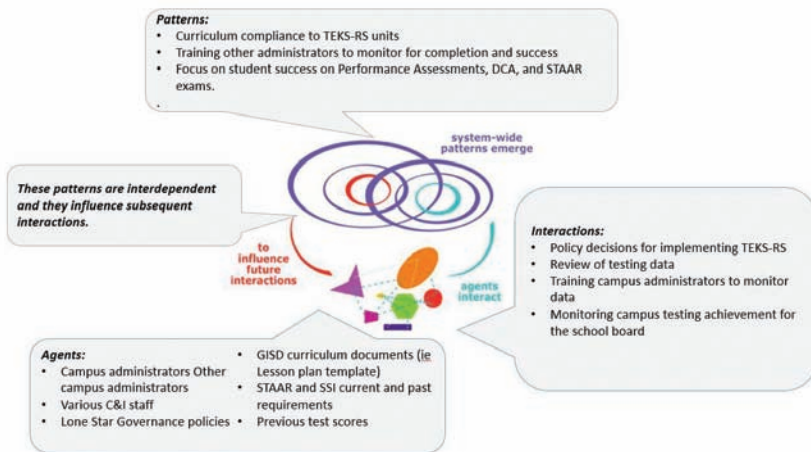
Figure 6 Dr. Osborn-District C&I level CAS

2019, 2020a-c). As such, the cyclical District Common Assessment (DCA) program and the associated scores produced by these assessments were an accompanying agent within the system (Eoyang, 2005; Jennings & Bearak, 2014).

District Interactions

As the Executive Director of the C&I department, Dr. Oswald said that she organized and managed curricular decisions at the district level through policy implementation. She mentioned delegating much of this work to the various cohorts within the C&I staff and trained campus principals in how to analyze testing data for decision making. Many of the agents at the district level worked to translate these policy decisions into other system levels through training or compliance management. For example, Dr. Oswald noted several times throughout the interview that the role of curriculum coordinators and instructional coaches was to work with campus administrators and teachers to ensure compliance to the TEKS-RS curriculum and review assessment data for quality control. She also noted that her job was to use this information to produce reports for the system-wide school board. As with the classroom and campus administration levels, the mandates of TEKS based instruction and high-stakes testing were treated as ubiquitous and a part of each policy and decision.

District Patterns

Responding to the influences of state-mandated testing, the C&I system developed curricular and within-district testing policies to constantly monitor

student, teacher, and campus progress. Dr. Oswald also created training systems to better monitor student and teacher success. Implementation of the TEKS-RS allowed the district to easily implement a curricular system with these policies through patterns of monitoring and compliance. Considering the complex, nested system of GISD, these policies served to constrain system levels within the district.

The theme of *Teaching and Learning as a Business* emerged strongly throughout Dr. Oswald's interview as managing curricular decisions was a main component of her position. She focused on and enforced compliance with the TEKS-RS and DCA assessments through policy constrictions and constant quality control measures. These constraints were strengthened through the narrowed approach to curriculum that made up the second theme of *Narrowing Curriculum to Products and Programs.* Another main function of the C&I department was to select and distribute curriculum resources, like TEKS-RS, which streamlined the curriculum and supported test preparation. Like the classroom and campus levels, the close connection between the assigned skills and their assessment supported direct test preparation and the third theme of *Defining Success as Passing the Test.* Dr. Oswald's consistent review of quality for the campuses and students across the district hinged entirely on test score production.

Tensions in the Learning Landscape

A healthy, adaptive learning landscape is diverse enough to adapt to new information or changing conditions while maintaining enough similarity to hold together as a cohesive system; the tensions are balanced. Agents within a system are interdependent—tensions within a learning landscape creates energy and opportunities within the system (Patterson & Holladay, 2018) to generate interactions and patterns. The tensions within GISD's learning landscape (Figure 7) are trending towards standardization, compliance, replication, and top-down interactions.

GISD generated tensions that tended towards standardization and a constrained organization. Managing teaching and learning like a business required a common goal such as success in testing and a narrowed, skill-focus approach to meeting that goal. Such constraints, however, begin to transform the system from an authentic, complex, and generative ecology to a more linear, rote, and business-like system. Each of the participants were more like a specialized gear in a complicated machine; they knew their individual roles in making the mechanics of the system function and were content moving towards their goals of improved test scores.

Maintaining this standardized approach to education means that the problems that plague education will continue to do so. For example, while student
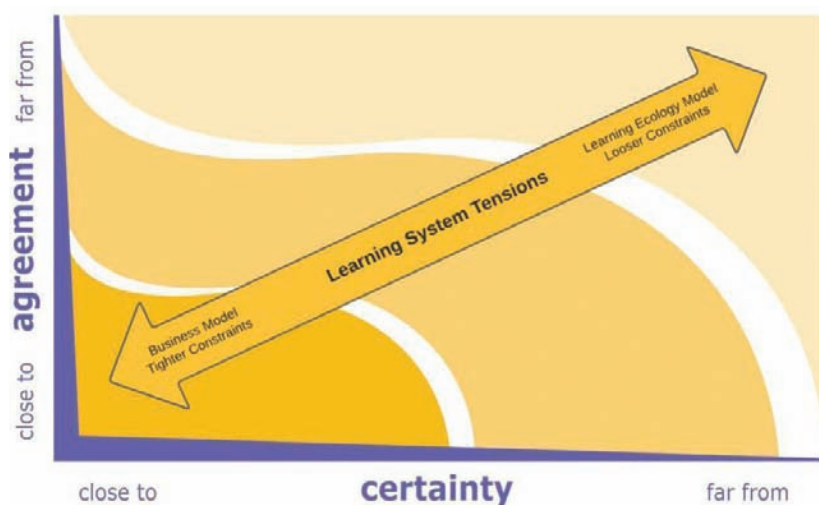
Figure 7 Learning System Tensions Within GISD

diversity is not in and of itself a problem, standardized policies that require different learners to show mastery in the same way create a marginalizing effect for students with diverse abilities, backgrounds, or languages. These tensions can create exhausted and disconnected educators, which in turn leads to unengaging curriculum and unengaged students. When educational systems do not include the flexibility to adapt to these common situations, many of these issues continue to go unresolved.

On the other hand, systems that lack any constraints or common elements of cohesion are too disconnected to interact and create patterns that might support these common educational issues. In the extreme, complexity theory assumes that the multitude of variables will push systems ever towards the brink of chaos (Doll, 2008). There is tension between the extremes of standardization and chaos, and it is this tension that prompts systems to react and adapt to situations in ways that are appropriate and generative. When patterns of behavior develop from these reactions that tend too much in either direction, the system will struggle to adapt to new circumstances in a way that is appropriate for that situation.

In regard to GISD, a testwise approach to learning prompts tight constraints and standardization to such a degree that teaching and learning is not able to adapt for student differentiation, innovation, or unpredictable futures. The themes that emerged from the data highlight how these domains are moved more towards constraints and standardization. Diversity within the GISD system

was constrained through narrowing curriculum to the prescribed skills seen on mandated testing, and management that ensured compliance to this curricular focus. Similarly, cohesion within the system became consistency as each participant was expected to specialize and be consistent in their roles. This consistency was likewise supported by the narrowed curriculum and enforced through management requirements of compliance and quality control.

Discussion

The adaptive action cycle (Eoyang & Holladay, 2013; Patterson et al., 2012; Patterson & Holladay, 2018) asks the following questions: What? So what? Now what? According to Patterson and Holladay (2018), "you build adaptive capacity by helping everyone in the system to notice, name, interpret, and influence patterns that emerge in their systems" (p. 29). However, within the nested systems for GISD, tensions served to constrain the adaptive capacity of the system. Considering these identified themes and patterns in terms of the Learning Landscape (HSD, 2016), they highlight how the GISD system is becoming a system of tighter constraints and standardization. All three participants across the system levels recognized these constraints and referred to them as policy decisions and expectations based on the TEKS-RS curriculum. Because the GISD learning ecology is highly constrained, it lacks the ability to adapt to unpredictable events and changing contexts. The most notable example was in reaction to the COVID-19 pandemic and quarantine.

So what? Why does it matter that the system is standardized and linear versus complex and adaptive? While a test-centric and standardized approach supports successful testing, it does not support learning beyond that testing. In short, students who were successful on tests were not able to demonstrate those same skills outside the tests (Holcombe et al., 2013; Jennings & Bearak, 2014). Being able to complete a task is only one part of learning. While using tasks to break down larger, generative or inquiry learning projects can be a way to scaffold learning, the tasks alone do not prompt students or teachers to reflect on why such a task is important or how to adapt the task to current or future needs. It is the focus on the how and why that allows for generative, twenty-first century learning.

Now what? What does this mean in terms of literacy curriculum and instruction? Recognizing that teaching (specifically literacy instruction) is an emergent and generative process prompts educators to relinquish perceived control over the classroom and students. Such a learning ecology is less constrained by teacher-centered practices and more constrained by student-centered practices and inquiry. This returns the academic focus to humanizing, generative activities

that are assessed through growth models and portfolios. The questions students ask and the projects they want to create influence the stance they take when reading (Rosenblatt, 1993), which in turn affects the learning interactions between individual students and their literacy growth.

If higher test scores are all that we want from our school systems, then standardization is an appropriate approach. A standardized approach to literacy instruction can result in the teaching of disaggregated skills, akin to the Science of Teaching Reading (Mosley Wetzel et al., 2020). Instead, when enacted as a complex process, literacy is generative and transformative (Rosenblatt, 1988, 1993), generating new patterns of understanding. Classroom teachers and educational leaders at the campus and district level can and should push back against this progressive standardization of curricular decisions through adaptive action. While there are many agents at play in complex adaptive systems, these educators are a part of that system and as such they can exert influence on the patterns that develop in the future.

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THE SCIENCE OF TEACHING READING: THE IMPACT OF MEDIA AND POLICY ON TEXAS TEACHER EDUCATION

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Abstract

The "Science of Reading" (SOR) movement has impacted teacher training and the way reading is taught across the United States. Driven by media reports that science has proven there is one way to teach reading effectively to all kids, the movement has narrowly aligned science with phonemic awareness and phonics instruction. The national emphasis on the SOR led to new teacher certification requirements in Texas. Although teacher candidates already take a content exam to demonstrate proficiency in English Language Arts and Reading (ELAR) Standards, a second literacy assessment, the "Science of Teaching Reading" (STR) exam, was added to certification requirements in 2021. The purpose of this manuscript is to examine the impact of media and policy on Texas Teacher education. This purpose is accomplished with an overview of the SOR movement, its contributions to legislative mandates, and a systematic examination of Texas Teacher certification requirements related to literacy.

Keywords: Science of Reading; Science of Teaching Reading; Texas; Education policy; phonics

Introduction

The "Science of Reading" (SOR) has gained traction due to public media, resulting in a nationwide prioritization of teacher training and changes in the way reading is taught (Chu, 2022; Reinking et al., 2023; Samuels, 2021; Schwartz,

2022a, 2022b; Shanahan, 2020; Tierney & Pearson, 2023). These changes came about as a result of nation-wide critiques that teachers and the institutions that prepare them lack knowledge about how to teach reading (Hindman, et al., 2020; Hurford, 2020; Moats, 2020; Wexler, 2018). Composed of individuals who teach reading in K-12 institutions and teacher preparation programs, ALER members engaged in conversations about the SOR at this year's conference, and it was no surprise that SOR presentations drew large audiences. Even though the topic has caused polarization and controversy in terms of what constitutes "science," the issue has also brought literacy researchers and educators together to address accusations which suggest our programs are not preparing teachers to teach reading (Hanford, 2018; Swartz, 2022a, 2022b).

The nationwide emphasis on the SOR has led to new teacher certification requirements in several states (Reinking et al., 2023; Swartz, 2022a, 2022b). In Texas, although teacher candidates already take a content exam to demonstrate proficiency in teaching English Language Arts and Reading (ELAR), a new "Science of Teaching Reading" (STR) exam has been added to certification requirements. This second literacy exam for Texas teacher candidates is aligned with "Language Essentials for Teachers of Reading and Spelling" (LETRS) (LETRS, 2020), a course developed by Louisa Moats and Carol Tolman. The purpose of this manuscript is to examine the impact of media and policy on Texas Teacher education. This purpose will be accomplished with an overview of the SOR movement, its contributions to legislative mandates, and a systematic examination of Texas teacher certification requirements related to literacy instruction. This ALER presentation contributes to the 2022 conference theme, "Elevating the Role of Creativity, Identity, and Voice in Literacy," by encouraging ALER's members to use their voices and expertise to address these trends with knowledge of a wide range of literacy research.

What is the Science of Reading?

The term science of reading (SOR), often used for theory and research that explains how reading occurs in the brains of individual readers (Pearson, 2020), has more recently been used in the popular press to represent a movement supportive of more phonics instruction (Reinking et al., 2023). Previously referred to as scientifically-based reading research, or evidence-based reading research, the idea behind the "science" is to ensure instruction is based on evidence from empirical research. Shanahan (2021), active in conversations surrounding the SOR, suggests this practice has applied to reading instruction for over 200 years. When asked *What is the Science of Reading?,* Shanahan (2021)

responded with, "That depends on who you talk to. There is no agreed upon definition" (para. 1). This response alludes to the ongoing controversy and disagreements around the best ways to approach reading instruction, which have been prevalent across a variety of media outlets.

Finding the best ways to teach children to read was the focus of the National Reading Panel (NRP). When the NRP convened in the 1990s, panel members were charged with examining what constituted scientifically-based reading instruction. Shanahan, who served on the panel, noted that "that term focused specifically on instructional studies and provided a specific legal definition of the term; then scientists were empaneled to determine the scope of the matter based on research reviews" (para. 14). The panel, commissioned by Congress in 1997, was tasked with reviewing research on how reading develops, determining the most effective evidence-based methods for teaching children to read, and describing which methods of reading instruction are ready for classroom use (National Institute of Child Health and Human Development, 2000). The NRP reported that the best approaches to teaching reading include explicit phonemic awareness instruction, systematic phonics instruction, and fluency, vocabulary, and comprehension instruction (National Institute of Child Health and Human Development, 2000). Even though the panel's report focused on *five* pillars of effective reading instruction and stated that "Phonics should not become the dominant component in a reading program" (NRP, 2000, p. 97), phonemic awareness and phonics have remained the primary focus of the SOR movement. In addition, the terms *explicit* and *systematic*, found in the NRP report, have become key in defining SOR. For example, the Hechinger Report defined the SOR as "a decades-old approach that says instruction should be extremely explicit because reading is not instinctive, like speech" (Gilreath, 2021, para. 24).

The SOR movement suggests that the science around reading instruction is settled. For example, Louisa Moats (2020) author of LETRS training, proposes that the recommendations she writes about have become "settled" science, and that "researchers are no longer debating the importance of systematic multiyear phonics and word analysis instruction or of a large academic vocabulary" (p. 7). Researchers "fast-checking" the SOR would counter that the term "*settled science* is an oxymoron." In other words, science is never settled, but instead is always evolving and awaiting the next empirical finding (Tierney & Pearson, 2023).

Media Influence

Among the advocates that the science *is* settled (Moats, 2020) is Emily Hanford, whose podcasts, such as *Hard Words* (2018) and *Sold a Story* (2022), have sparked heated conversations across the literacy field. Hanford (2018) reports that "Most

teachers nationwide are not being taught reading science in their teacher preparation programs because many deans and faculty in colleges of education either don't know the science or dismiss it. As a result of their intransigence, millions of kids have been set up to fail" (para. 9). *Education Week* also reported, "Most teachers in the United States weren't trained in this (SOR) framework. Instead, the majority say that they practice balanced literacy, a less structured approach that relies heavily on teacher choice and professional judgment" (Schwartz, 2022a, para. 9). These media claims reflect bias and lack evidence to support such statements (Aukerman, 2022; Reinking, et al., 2023). It is also important to note that exercising "professional judgment" is essential for all fields or work—doctors, lawyers, etc.

The media has the attention of policy makers, and the focus of nationwide policies has been predominantly skills-based instruction related to explicit and systematic phonemic awareness and phonics instruction (Gabriel, 2020; Shanahan, 2020). Furthermore, it is assumed that literacy educators do not have the expertise to prepare teacher candidates to teach these skills. Literacy educators across the nation have been encouraged, or required, to take training related to structured literacy instruction, including the LETRS training, which was developed by Louis Moats. According to Schwartz (2022b), a reporter who has published a series of articles related to the SOR for *Education Week*, 23 states have worked with LETRS to implement varying degrees of statewide training. North Carolina's statute requires that every K–5 teacher undergo the two-year professional development, costing the state $50 million to implement over two years and takes about 160 hours to complete (Chu, 2022). The rationale behind the use of LETRS can traced to Mississippi and what many consider to be the beginning of the SOR movement.

The dissemination of information related to the SOR gained momentum after the state of Mississippi passed legislation in 2013 to overhaul their approach to reading instruction and teacher preparation (Hanford, 2018; Swartz, 2022) and in 2019 reported huge improvements on students' reading scores on the National Assessment of Educational Progress (NAEP). The overhaul included LETRS training with K-3 teachers in 2014 as a way to implement evidence-based practices. Hence, the rise in demand for LETRS and the SOR. Much publicity around the SOR since then, led by reporter Emily Hanford, has been unfairly critical of teachers as well as the programs that prepare them. Goodwin and Jimenez (2020) assert that mainstream media has contributed to how the topic of the SOR is polarizing among parents, policymakers, and literacy experts. "The media uses spectacle to generate points of view, perceptions, anxieties, aspirations, and strategies to strengthen or undermine support for specific education

policies, practices, and ideologies" (Anderson, 2007, p. 103). The media's impact on policy related to the SOR can be seen across the nation. According to Schwartz (2022a), since 2013, 29 states and the District of Columbia have new legislation or policies related to evidence-based reading instruction. In the next section, I focus on the impact of SOR trends in Texas.

Texas and the Science of Teaching Reading

Instead of the SOR, Texas adopted the phrase "Science of Teaching Reading," which has been used in Texas since January 2015, when the Texas Education Agency (TEA) released a revised version of the English Language Arts and Reading (ELAR) subject exam (Pilgrim, 2022). The new exam was titled English Language Arts and Reading and the ***Science of Teaching Reading*** EC-6. In addition, each ELAR competency ended with the added phrase ***"in accordance with the STR"*** (TEA, 2019, p. 11-12). In June 2019, the 86th Texas Legislature passed House Bill 3 (HB 3), which required a new, additional certification exam for five fields: EC-3, EC-6, Core Subjects 4-8, 4-8 ELAR, and 4-8 ELAR/Social Studies. In addition, HB 3 requires that all K-3 grade teachers and principals attend a "teacher literacy achievement academy" by the 2022 - 23 school year.

The Texas alignment with the SOR extends beyond the name of its new certification test or its mandated reading academies. TEA's stance on reading instruction is visible on its website. For example, the Texas Education Agency (TEA) (2019) states that "science is summarized most easily with the Simple View of Reading" (para. 2). The SVR model proposes predicts that readers who have underdeveloped skills in decoding or language comprehension will struggle with reading comprehension (Figure 1).

The original model used to represent the SVR (see Hoover and Tumner, 2020, for updated model), the model Texas cites, describes comprehension as the product of decoding and language comprehension (Gough & Tunmer, 1986). Even though researchers caution against an oversimplification of reading with such models (Compton-Lilly et al., 2020; Hooever & Tunmer, 2018; Silverman

Figure 1 Simple View of Reading, Gough and Tunmer, 1986

et al., 2020) and express concern that even though original SVR model gave equal footing to decoding and language comprehension, the SVR has been used to ignite public debate and to hyperfocus on decoding and word reading (Cervetti et al., 2020).

Texas Teacher Certification Exams

A closer look at the STR certification exam provides additional insight into ways the SOR movement contributed to the exam's content. As previously noted, Texas teacher candidates now take both a content exam to demonstrate proficiency in English Language Arts and Reading (ELAR) Standards and a new "Science of Teaching Reading" (STR) exam. In other words, Texas developed *two* sets of standards to represent literacy skills, even though STR wording had already been added to the existing ELAR exam. TEA aligned the STR exam with content from LETRS training and provided opportunities for reading professors in educator preparations programs (EPPs) to attend the training in 2019-2020. The voluntary training spanned the course of a year, included both face-to-face training as well as online training, and required a portfolio in order to gain a certificate of completion. TEA also offered Reading Academy training for literacy professors (see HB 3), who participated in cohorts across the state. Many universities sent faculty to participate in these trainings in order to ensure their programs aligned with the content pre-service teachers would encounter on the new STR certification exam. Attendees received a 28-page document that outlined the alignment of the STR exam to LETRS (LETRS, 2020).

Table 1 presents an overview of testing details related to the current required literacy certification exams. With 90 questions and a five-hour time frame, the STR is the lengthier of the two literacy exams. The STR also includes a constructed response section, which requires test-takers to analyze exhibits of

TABLE 1
Texas Teacher Literacy Assessment

Exam	Exam Code	Time	# of Questions (selected response)	Cost
Core Subjects (EC-6)	391	5 hours (1 hr.10 min. for just ELAR)	45	$116 ($58 if taken individually)
STR	293	5 hours	90 *also includes 1 constructed response	$136

Source: https://www.tx.nesinc.com/TestView.aspx?f=HTML_FRAG/TX391_TestPage.html

student performance and demonstrate knowledge of reading instruction with an in-depth written response.

Literacy Standards

Reading and writing go hand-in-hand. The reading and writing connection is one of many reasons literacy researchers, theorists, and practitioners have adopted the term *literacy* to used instead of reading (Compton-Lily, 2020; Lisenbee et al., 2020, 2020). Graham (2020), who advocates for the integration of the science of reading and writing, states that "It is not possible to speak about reading and writing as if they are unrelated . . . Although reading and writing each require specific skills sets, it is theorized that "the knowledge and cognitive systems that makes one possible makes the other possible, too" (p. S37).

The ELAR certification test included content related to both reading and writing skills, acknowledging their connection. With the addition of a second literacy exam, I wondered how the TEA categorized reading and writing skills across the two sets of literacy standards. I also wondered if both sets of standards incorporate skills aligned with the popular "science." In systematically examining the ELAR and STR standards, I first examined the standards side by side. Table 2 presents an overview of the former and new standards. The 2019 ELAR Standards, which were retrieved from the Core Subjects Preparation Manual 291 (TEA, 2019a), included the 13 competency statements and 120 descriptive statements. Currently, the ELAR Standards, which were retrieved from the Core Subjects Preparation Manual 391 (TEA, 2020b), include 10 competency statements and 89 descriptive statements. The STR Standards, which were retrieved from the STR Preparation Manual 293 (TEA, 2020a), incorporate a total of 13 competence indicators and 147 descriptive statements. The required skills for Texas teacher candidates (EC-6 and 4-8) have increased significantly from 120 to a total of 236 skills (Pilgrim, 2022). The next section details this comparison of literacy standards.

A Comparison of Standards and Competencies

First, the original standards were compared to the new sets of literacy standards to understand how TEA categorized the topics. In other words, which standards remained ELAR standards, and which standards were labeled STR standards? A comparison of the standards reveals that *Phonological Awareness* and *Alphabetic Principal* were taken out of the ELAR standards and added to the STR standards as *Phonological Awareness and Phonemic Awareness* and *Print Concepts and Alphabetic Knowledge.* The revisions omitted ELAR standard 4, *Literacy*

TABLE 2
Old and New Literacy Standards

2019 EC-6 ELAR Standards	New ELAR Standards	New STR Standards
Oral Language	Oral Language	Foundations of the STR
Phonological Awareness	Word Analysis & ID skills	Foundations of Reading Assessment
Alphabetic Principle	Reading Fluency	Oral Language Foundations of Reading Dev.
Literacy Development	Reading Comprehension & Applications	Phonological and Phonemic Awareness
Word Analysis and ID skills	Vocabulary Development	Print Concepts and Alphabetic Knowledge
Fluency Reading	Reading, Research, & Inquiry	Phonics and Other Word ID Skills
Reading Comprehension & Applications	Writing Conventions	Syllabication and Morphemic Analysis Skills
Vocabulary Development	Written Communication	Reading Fluency
Reading, Research, & Inquiry	Viewing & Representing	Vocabulary Development
Writing Conventions	Assessment of Developing Literacy	Comprehension Development
Written Communication		Comprehension of Literary Texts
Viewing and Representing		Comprehension of Information Texts
Assessment of Developing Literacy		Analysis and Response

TEA, 2019a, TEA, 2020a, TEA, 2020b

Development, from both sets of revised standards. Even though STR competencies allude to developmentally appropriate practices (Table 3), many skills under this standard have been neglected. Standards assessed on both exams include: *Oral Language, Reading Fluency, Vocabulary Development, Comprehension*, and *Assessment.* One major difference between the two sets of standards is that the ELAR standards include standards related to writing—*Written Conventions* and *Written Communication*— and the STR standards do not. *Viewing and Representing* and *Reading, Research and Inquiry* are also unique to the ELAR exam.

TABLE 3
A Comparison of STR and ELAR Competencies

	Reading Fluency	**Vocabulary Development**	**Comprehension**
ELAR	The teacher understands the importance of fluency for reading comprehension and provides many opportunities for students to improve their reading fluency	The teacher knows the importance of vocabulary development and applies that knowledge to teach reading, listening, speaking, and writing	The teacher understands the importance of reading for understanding, knows the components and processes of reading comprehension, and teaches students strategies for improving their comprehension, including using a variety of texts and contexts
STR	Understand concepts, principles, and best practices related to the development of reading fluency, and demonstrate knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote all students' development of grade-level reading fluency.	Understand concepts, principles, and best practices related to vocabulary development, and demonstrate knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote all students' development of grade-level vocabulary knowledge and skills	Understand concepts, principles, and best practices related to the development of reading comprehension, and demonstrate knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote all students' development of reading comprehension strategies in order to gain, clarify, and deepen understanding of appropriately complex texts

TEA, 2020a, 2020b

Standards added to the STR (not previously represented) include *Foundations of the STR*, *Syllabication and Morphemic Analysis Skills,* and *Analysis and Response.*

Each standard includes a competency statement and a list of descriptive statements which provide in-depth details about the skills required for each competency. How do the duplicated standards differ on the two literacy exams? Table 3 presents the competency statements for three of the duplicated standards. Both sets of statements begin with "the teacher understands," but the STR statements adds "and demonstrate." This portion of the competency statement most likely refers to the ability to examine the constructed response exhibits and write a written response. Other than the types of assessment tasks, it is unclear how "understand the importance of" will be assessed differently than "understand concepts, principles, and best practices." It is also unclear why the STR competency includes "evidence-based assessment and instructional practices" and the ELAR does not.

The descriptor statements, too numerous to share here, reflect a similar use of verbs to define the skill that will be assessed. Like the competencies, the descriptor statements used the verb "understand" to describe expectations for the ELAR exam, while the verb "demonstrate" is used in the STR exam. In fact, *demonstrate(s)* is used a total of 154 times in the STR manual, while the ELAR manual does not use it at all.

Other differences exist between the two sets of standards and competencies. For example, the ELAR preparation manual uses the term "explicit" in the competencies and descriptor statements two times compared to 44 times in the STR preparation manual and "systematic" four times compared to 18 times in the STR preparation manual. Also, the phrase *evidence-based* is specific to the STR exam, in which the phase is used 14 times in the competencies and descriptor statements. These heavily emphasized terms reflect the SOR, as does the heavy emphasis on phonics and phonemic awareness. Phonics and phonological awareness are not mentioned in the ELAR competencies; however, phonics is included in the STR competencies and descriptor statements 22 times (104 times in the full manual), and phonological awareness is included 13 times (46 times in the full manual). Decoding is in the STR competencies and descriptor statements 30 times (71 in the full manual) and only 1 time in the ELAR competencies (5 in the full manual).

Dyslexia legislation has also been linked to the SOR movement (Johnston, et al., 2020). Knowledge about dyslexia was not included in the 2019 ELAR Standards. Instead, this knowledge was previously assessed on the Texas Pedagogy and Professional Responsibilities Exam, which is also required for EC-12 certification

in Texas. TEA (2020a) added dyslexia to the STR standard titled, Foundations of the STR. Competency descriptor O states that teachers should:

> Recognize that decoding-related difficulties and disabilities represent the most common source of reading difficulty; demonstrate knowledge of distinguishing characteristics of dyslexia and dysgraphia, including early indicators of dyslexia and dysgraphia; and demonstrate familiarity with evidence-based instructional strategies and best practices that general education teachers in prekindergarten through grade-3 classrooms can use to help support the literacy development of students with identified delays in decoding and spelling (p. 5).

The STR manual addresses dyslexia in either descriptor statements or practice questions 17 times, but the ELAR manual does not mention dyslexia at all.

This brings us to our next difference between the two exams. Written Communication and Writing Conventions are unique to the ELAR content exam, even though writing plays in literacy instruction. Graham states that "It is not possible to speak about reading and writing as if they are unrelated. Reading and writing are connected at the most intimate level. Although reading and writing each require specific skills sets, it is theorized that "the knowledge and cognitive systems that makes one possible makes the other possible, too" (Graham, 2020, p. S37). While the ELAR includes comprehensive skills used by readers and writers, the STR standards reflect linguistic skills. Writing skills, other than spelling (encoding), are not included in the STR standards. The STR competencies include spelling 23 times; the ELAR mentions spelling 4 times—once with the vocabulary standard (dictionary skills) and 3 times under writing conventions.

Texas Reading Academies

Although not the focus of this article, the Texas Reading Academies, aligned with the SOR, have resulted in controversy across the state of Texas. Teachers in -3 classrooms in Texas had until 2023 to complete the Reading Academies course (non-completers must reenroll). The legislative mandate, passed prior to school closures during the pandemic (and prior to major teacher shortages) was intended to improve reading skills for elementary students. Although the academies are supposed to comprise 60 hours' worth of content (and assessments), a recent survey indicated that nearly half of the educators reported that the course

took more than 120 hours to complete (Lopez, 2022). Only 18% said it took between 60 and 80 hours and 95% said they worked after hours or weekends to finish it.

I participated in the Reading Academies with a teacher educator cohort in order to stay abreast of content distributed in the workshops. I felt that even though the academies were extensive and time-consuming, the content was well-developed and comprehensive, focusing on skills that extend beyond SOR's focus on phonics. The modules at that time included: STR, Establishing a Literacy Community, Data to Inform Instruction, Oral Language & Vocabulary, Phonological Awareness, Alphabet Knowledge & Handwriting, Decoding, Encoding, & Word Study, Reading Fluency, Reading Comprehension, Written Composition, and Tiered Supports. Note the inclusion of written composition!

Discussion

Well-intentioned legislation in Texas has led to increased pressures during a post-pandemic era in which a teacher shortage worsens (Lopez, 2022). Adding a certification exam for pre-service teachers has resulted in increased costs and time commitments. Adding intense professional development in the form of the reading academies has contributed to teacher stress (Lopez, 2022) It could and should be argued that teacher educators were already addressing the "science" prior to the passing of HB3. According to TEA (2021), the new ELAR component of the Core Subjects exam (391) was developed to remove duplicative content on the new STR TExES exam. That statement alone indicates that STR knowledge was previously assessed. In addition, the exams continue to include duplicative content, with the following shared standards: *Oral Language, Reading Fluency, Vocabulary Development, Comprehension* (labels differ), and *Assessment.* Therefore, this brief comparison of the two exams raises more questions than answers. *Why two exams? Shouldn't instruction related to ELAR be just as science-driven and "explicitly" implemented as the STR? How can literacy standards be separated? Why does the STR exam required higher-level skills than the ELAR exam (verbs reflect demonstration rather than understanding)? Is the STR exam a result of pressure stemming from media influence? Is the alignment with LETRS a result of pressure stemming from media influence?*

The timeline of policy and certification exam revisions in Texas indicate that the TEA was intentional in incorporating research related to reading education in standards for pre-service and in-service teachers, which is a good thing. Texas began using the STR as early as 2015, prior to other states' reactions to media influencers like Emily Hanford. The use of the phrase "science of teaching

reading" instead of "science of reading" is unique to Texas. By adding *teaching* to the phrase, TEA, whether intentional or not, the emphasis is placed on evidence-based pedagogy and the teacher's role in teaching reading, which is also a good thing. In his article, What Constitutes a Science of Reading Instruction? Shanahan extends conversation beyond the SOR to include a discussion of research related to instruction and its many varying factors. He suggests that the proponents of the SOR, who advocate for a substantial body of high-quality cognitive and neuroscientific evidence in reading instruction, have defined the issue too narrowly, "ignoring most issues of reading instruction beyond decoding and beginning reading" (p. S244). He asserts, "These arguments have underestimated the challenges inherent in applying any research findings on scale and may have overestimated the likely payoffs from such applications" (p. S244).

Shanahan's article appeared among many others in one of two special issues of *Reading Research Quarterly*, devoted to this trending topic. The publicity around the SOR prompted the International Literacy Association (ILA) to participate in conversations about the SOR as reported by the media. To gain a broader perspective of the complexities of SOR instruction, in 2020, the editors of *Reading Research Quarterly*, a journal of the ILA issued a call for submissions examining research on the SOR. The goal was to "highlight how bridging perspectives via accurate and meaningful information can move us forward" (ILA, 2020, para. 6). An overwhelming response to the call led to the publication of two special issues of the journal related to conceptualizations of the SOR. RRQ authors repeatedly noted an oversimplification of the SOR with models like the Simple View of Reading (SVR) (Cervetti et al., 2020; Compton-Lilly et al., 2020; Galloway et al., 2020; Shanahan, 2020). As previously noted, TEA (2019b) used the SVR in their annual report. Indeed, simplifying reading with models like the SVR has historically attracted policymakers, who like solutions that are easily mandated, packaged, and sold to schools (Compton-Lilly et al., 2020; Pearson, 2004). Even though TEA continues to include teacher certification standards that are comprehensive and reading academies that encompass the "science" beyond phonics, other more recent TEA practices may be a cause for concern. For example, In accordance with Texas Education Code (TEC), §28.0062, local educational agencies (LEAs) are required to select a phonics curriculum that applies systematic direct instruction in kindergarten through third grade. This may or may not be a concern. The list of compliant programs is available at this website—https://texasresourcereview.org/sites/default/files/2023-04/trr-list-of-compliant-phonics-programs.pdf. A potential concern would be the determination of programs that meet (or do not meet) compliancy requirements. The current list includes the Amply Texas Elementary Literacy Program. Published by

TEA Open Education Resources, these materials include script-based materials that include a narrow focus. As increasing numbers of bills define or mandate instructional approaches across the nation, literacy experts become increasingly concerned about sanctions that not only define what must be taught but sanctions against any deviations from mandated practice (Reinking et al., 2023). Of great concern is that by sanctioning what must be taught, we neglect the professional flexibility and judgment necessary to meet the diverse needs of students.

The increasing media influence related to the SOR, driven by claims that reading scores are down due to a lack of phonics instruction (Reinking et al., 2023), is a concern. Our nation's reading deficit has driven policy for decades. For example, when *A Nation at Risk* was released in 1983 (United States. National Commission on Excellence in Education, 1983), the same decade the SVR (1986) was published, it received widespread media coverage and contributed to concerns that American schools were failing. The report included many recommendations for general education. Recommendations for improving teacher quality included higher standards for teacher-preparation programs, teacher salaries that were professionally competitive and based on performance, 11-month contracts for teachers allowing more time for curriculum and professional development, career ladders that differentiated teachers based on experience and skill, more resources devoted to teacher-shortage areas, incentives for drawing highly qualified applicants into the profession, and mentoring programs for novice teachers that were designed by experienced teachers (United States. National Commission on Excellence in Education, 1983).

In 1985, Anderson et al. published a response from the reading community. The work, *Becoming a Nation of Readers*, came out of a commission of national experts convened to review the role of phonics in beginning reading (1985). Sound familiar? The report provided a summary of research on reading processes and texts. Revisiting *Becoming a Nation of Readers* provides a reminder that reading is a constructive process, a generalization *not* promoted in current media outlets. For example, "In addition to obtaining information from the letters and words in a text, reading involves selecting and using knowledge about people, places, and things, and knowledge about texts and their organization. A text is not so much a vessel containing meaning as it is a source of partial information that enables the reader to use already-possessed knowledge to determine the intended meaning" (p. 8).

It is important for ALER members to encourage teachers to be critical consumers of media reports, especially those related to reading instruction. Maren Aukerman's three-part Critical Conversations series, published on LRA's website, presents potential issues with journalism related to the SOR. Aukerman (2022)

cautions against writing that exhibits bias and authors that lack an understanding of the topic. The issues she reports as problematic in current SOR reporting include 1) a lack of balance in reporting; 2) sensationalistic arguments; 3) a narrow lens regarding phonics instruction; and 4) a lack of evidence to support some media claims. (See https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-is-reporting-biased/ to access the series). No matter how well-intentioned the reporting, "the reality is that some journalists reporting on education may have an insufficiently robust understanding of the field of reading research themselves, which can make it harder to engage in rigorous reporting" (para 19).

Recommendations

The primary recommendation is that states like Texas *not* try to address the SOR by adding and duplicating literacy standards to highlight the SOR. The STR can be incorporated into Texas ELAR standards, without creating new certification requirements that cost new teachers excessive amounts of money. Maintaining one set of standards also enables a more rational application of skills related to reading and writing, which occur hand in hand. Standards across the board should reflect a teacher's ability to demonstrate skills. Therefore, one set of evidence-based literacy standards for Texas teacher certification is sufficient.

Since it is unlikely the SOR movement toward more phonics instruction will lose momentum in the near future, I also recommend that literacy educators and researchers use their voices and expertise to address these trends with knowledge of a wide range of literacy research. In the current environment, those who ask questions or voice any opposition to SOR trends are portrayed as "unenlightened" or "science-deniers" (Strauss, 2023). Even though I firmly believe phonics plays a major role in teaching children to read, I also believe that the voices of the media, many of which lack expertise, are being heard over the voices of the teachers, researchers, and experts, leading to the spread of misinformation. In addition, the current environment surrounding this topic has, in my opinion, become mean-spirited. Yet, in revisiting ALER's mission statement, "Our members work at the forefront of policy, pedagogy and practice" (ALER, 2023).

Conclusion

Moje (NEPC, 2018) maintains that "there will always be people who are going to focus on one portion of what it means to teach and learn to read" (p. 10). The solution to a greater focus on the "science" is not a list of STR standards that exists separately from ELAR standards. Even though the noted overlap between

ELAR and STR standards makes sense, as both sets of standards describe skills related to literacy instruction, the outcome is that pre-service teachers are paying to take two literacy certification exams that cover similar content. Texas is one of many states with new policies related to the SOR. The policies, a result of assumptions that literacy educators were not teaching the "science" prior to recent legislative mandates, have had an unfortunate impact on teacher candidates in Texas. Wetzel et al. (2020) refer to this negative impact as "positionings of struggle in the science of teaching reading discourse" and "the targeting of teachers and teacher educators by policymakers and popular media writers" (p. 319). It is important that educators continue to explore the evolving nature of science and pedagogy. As literacy educators and researchers, it is essential to advocate for teachers and students by continuing to advance sciences of reading.

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FINDING THE BALANCE: NAVIGATING THE TENSIONS OF FACILITATED PRACTITIONER INQUIRY

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Abstract

This multiple case study offers valuable insights into effective literacy professional learning for early career teachers (ECTs). Through practitioner inquiry, three ECTs identified areas of dissonance, explored professional learning resources, and refined their literacy practices. During this process, the teachers found a balance between taking ownership of their inquiry and relying on the support and accountability of the facilitator. Literacy leaders can utilize facilitated practitioner inquiry to build self-efficacy in ECTs as they become more knowledgeable and effective literacy teachers.

Keywords: Professional learning, practitioners, early career teachers, self-efficacy, inquiry, ownership

Introduction

Early career teachers need effective, relevant literacy professional learning that empowers them to implement inclusive, responsive literacy practices. Traditional, one-size-fits-all professional development programs cannot address the individual needs of teachers (Husby, 2005). This is especially true for early career teachers (ECTs) who are flooded with new learning and often need additional support to reflect on and transfer new learning into their classrooms (Feiman-Nemser, 2001). Additionally, ECTs deserve opportunities to build their self-efficacy by participating in learning that aligns with their preferences and goals (Louws et al., 2017).

In this manuscript, I present findings from a study of three early career teachers who took up practitioner inquiry in their elementary literacy classrooms. While elevating these teachers' voices and experiences, I investigate the tension between ECTs taking ownership of their professional learning and their need for the support of a facilitator. Throughout I address the research question: How does the role of a facilitator impact early career teachers' implementation of inquiry in their literacy classrooms?

Literature Review

Many early career teachers participate in various forms of new teacher training and induction support, such as working with a mentor, common planning time with colleagues, and targeted professional development sessions (Wei et al., 2010). While most of these beginning teacher programs are temporary, they can contribute to a continuum of learning from teacher preparation to in-service professional growth (Feiman-Nemser, 2001). In particular, mentoring has the potential to support transformative learning for ECTs as they interrogate and reflect on their pedagogical practices (Nolan & Molla, 2018).

In the field of literacy, ECTs may be mentored by literacy coaches, instructional coaches, or other literacy specialists. Literacy coaching can enhance teachers' knowledge and skills, while also contributing to positive learning outcomes for students (Carlisle & Berebitsky, 2011). Some schools use coaches alongside professional development programs to assist with the implementation of new practices or curriculum (International Literacy Association, 2018). Literacy coaches can also provide individualized support for teachers as they learn how to establish effective instructional practices (Biancarosa et al., 2010). It is essential that literacy coaches are equipped to meet the unique needs of ECTs to build their agency as experts within their classrooms.

Alongside mentoring and coaching support, ECTs need opportunities to build their self-efficacy through self-directed and embedded professional learning. A teacher's sense of self-efficacy influences their classroom environment and students' learning outcomes (Bandura, 1993). One way to increase ECTs' ownership of their learning and professional growth is to provide opportunities for self-directed professional learning. Through self-directed learning, ECTs can set their own goals, choose the learning setting, determine the pace of learning, and decide how much time to dedicate to learning based on their individual needs (Dahlberg & Philippot, 2008; Hicks et al., 2018). Self-directed professional learning can be implemented alongside instructional coaching, peer coaching and observations, teacher study groups, or professional learning communities (Hicks et al., 2018).

Additionally, ECTs benefit from models of professional learning that are embedded in their local context. In contrast to formal professional development that often takes place outside of the classroom, job-embedded professional learning relies on informal, on-going opportunities for collaborative, active, and reflective practice (Darling-Hammond et al., 2017). This might include seeking advice from peers, professional learning communities, conducting peer observations, and building collaborative networks for planning and reflecting on practices (Parise & Spillane, 2010).

One effective model for self-directed, job-embedded professional learning is practitioner inquiry. More of a worldview than a tool, practitioner inquiry is a form of teacher research that encourages teachers to identify, interrogate, and critique their pedagogical practices and schooling structures in pursuit of creating equity for all learners (Cochran-Smith, 2015). As teachers dig into their practices, they begin to learn how to productively respond to dissonance within the classroom (Dana, 2013) and ways to responsively address students' needs (Dana, 2017). Importantly, practitioner inquiry centers teachers as knowers and creators of knowledge by raising their voices, perspectives, and experiences (Cochran-Smith & Lytle, 1993). Since teachers that are new to inquiry may need support understanding the process (Kennedy et al., 2009), literacy coaches or instructional specialists can work alongside teachers during their inquiry journeys.

Theoretical Framework

Practitioner inquiry, also known as practitioner research or teacher research, is conducted by teachers within their individual teaching context (Dana & Yendol-Hoppey, 2014). This model of inquiry is rooted in reflective practices (Schön, 1983). Through reflection, teachers interrogate various aspects of their teaching practices, including their beliefs, the curriculum, their pedagogy, and the needs of individual students (Dana, 2013). The teacher researchers engage in cycles of problem posing, data collection, making responsive changes, and sharing their findings (Butler et al., 2015; Dana 2013). Over time, teachers develop an inquiry stance (Cochran-Smith & Lytle, 2009), which allows them to engage with dissonance in their literacy classroom, including issues of politics and power embedded in language and literacy (Fecho & Allen, 2005).

In the field of literacy, practitioner inquiry provides a way for teachers to "deepen and concretise [their] understandings of critical and transformative literacy theories" (Simon et al., 2012, p. 6). This depth of inquiry is essential as it equips teachers to create more equitable learning by problematizing assumptions about culture, learning, language, and power (Cochran-Smith & Lytle,

1993). While teachers are interrogating these inequitable structures, their acts of resistance and transformation are expanding and informing the field of literacy research (Cochran-Smith & Lytle, 2009; Simon et al., 2012). Though teachers' individual inquiries do not develop generalizable theories, they do offer valuable knowledge about literacy teaching and learning that can contribute to broader understandings about literacy beyond the local context (Cochran-Smith & Lytle, 1993; Fecho & Allen, 2005).

Methodology

In this descriptive, multiple case study, I explored the lived experiences of three early career teachers as they took up practitioner inquiry in their literacy classrooms. In alignment with the goals of practitioner inquiry, I utilized qualitative research practices to prioritize the voices and experiences of the early career teachers, which allowed me to uncover knowledge that would not otherwise be accessible (Merriam, 1998).

Researcher's Positionality

I navigated multiple roles during this study, such as researcher, co-learner, professional development provider, literacy coach, and encourager. My background as a former elementary teacher and literacy consultant led me to analyze and critique the ways that traditional professional development failed to meet the needs of teachers, especially early career teachers. In the study design and throughout the research process, I sought to empower the early career teachers as owners of their professional growth and as knowledgeable experts within their literacy classrooms.

Participants & Setting

Through purposive sampling (Merriam, 1998), I invited three early career elementary literacy teachers who lived in central Texas to participate in a semester-long literacy professional learning experience in Fall 2020. Sally (all names are pseudonyms), a 25-year-old woman, identified as white. She completed a 4-year teacher education program and at the time of the study was in her second year of teaching a self-contained kindergarten class. Donna, a 37-year-old woman, also identified as white. While working as a paraprofessional, Donna completed an alternative certification program. At the time of the study, Donna was in her first full year of teaching. Donna's fourth grade teaching team shared students, so she taught two sections of math and science, as well as providing writing instruction to her homeroom class. Sally and Donna taught at different campuses in a suburban school district. Kelly, a 25-year-old woman, identified as Vietnamese

and white. She participated in a four-year teacher education program. At the time of the study, Kelly was in her third year of teaching. She taught a self-contained third grade class in an urban school district. Since this study took place during the Fall of 2020, I adjusted the research design to accommodate social distancing practices during the COVID-19 pandemic (Center for Disease Control & Prevention, 2021). The teachers were providing in-person instruction, but there were procedures in place, including limited partner work and wearing masks, that impacted the classroom setting.

Data Collection & Analysis

In contrast to traditional models of professional development, I designed this study to challenge educational research practices that make invisible the knowledge of teachers (Cochran-Smith & Lytle, 2009) by shifting from doing research *on* teachers to conducting research *with* them (Hicks et al., 2018). I centered the early career teachers' knowledge and voices through cycles of planning meetings, classroom observations, and reflection conferences. The teachers followed Dana's (2013) inquiry process by selecting a problem of practice to study, collecting data in the classroom, analyzing findings, taking action to implement new practices, and discussing their reflections. The teachers and I extended this cycle by co-designing professional learning plans (see Appendix) that gave them access to resources to inform their refinement of their literacy classrooms. Throughout the semester, I collected multiple sources of evidence to gain insights into the teachers' inquiry including interviews, observational notes, professional learning plans, and classroom artifacts.

I analyzed each early career teacher's professional learning as an individual case study. I used multiple rounds of coding to examine each case: initial framework analysis using Dana's (2013) inquiry cycle, open descriptive coding to capture additional details (Saldaña, 2016), and thematic analysis to identify and categorize overarching themes for each teacher (Braun & Clarke, 2006). Finally, I used cross-case analysis (Miles et al., 2020) to look for patterns across the three teachers' experiences. It was during this stage that I noticed the commonality of an ongoing tension in balancing facilitation and self-direction throughout the inquiry process, which is the focus of this paper.

Findings

Throughout the study, the ECTs regularly mentioned my role in their inquiry journey. In the final interview, I asked each teacher to share their thoughts about the impact of a facilitator on the practitioner inquiry process. The teachers

reported that they appreciated the opportunity to self-select areas of study based on their own needs and interests, but they also needed consistency and accountability in pursuing individual inquiries.

Facilitation: Supporting the Inquiry Process

Teachers new to the inquiry process benefit from a facilitator to assist in moving toward an inquiry stance (Cochran-Smith & Lytle, 2009; Kennedy et al., 2009). In this study, the ECTs mentioned the value of the support of a literacy expert and accountability partner. Sally, a second-year teacher, addressed the need for knowledgeable facilitators that can provide access to relevant resources for the inquiry process. She said:

> I think [having a facilitator is] beneficial. I think especially in your early years of teaching when you're still just figuring out what this is, and it's beneficial to have someone who's been in the classroom [and] knows what I'm talking about - has seen things and just to be supportive and encouraging and bring resources to the table.

In further conversation, Sally shared that the facilitator also served as a source of accountability through regular classroom visits.

Similarly, Kelly highlighted the importance of classroom visits during the inquiry process. In contrast to evaluative observations from administrators, Kelly appreciated perspectives and feedback that were not tied to her yearly performance review. She said:

> I can't tell from where I'm sitting and when I'm focusing...I hope they do what they need to do, right? But I can't constantly check in on them. And I think just having someone else in there just to be that person outside the bubble...I think it was really helpful having you in there and really pinpointing [what was happening]...just having someone I know is going to come in and witness my teaching, and I need to be honest with myself and prepare for it.

Kelly kept her professional learning plan (PLP), our shared document of resources, open on her computer. Before a scheduled visit, she would review her inquiry goals and reflect on her progress. By having a facilitator, Kelly was encouraged and motivated to continue refining her literacy instruction.

Donna shared how having a facilitator from outside the school district allowed for more freedom in her inquiry process. Donna was eager to experiment with new instructional practices, but she felt restricted by the district's curriculum. She said, "Sometimes it's good to have somebody completely outside say, 'Okay, but as a teacher, what's your goal? And how can we use those tools that they've given you to zone in on what you want to do in your classroom?'" Being able to trust the facilitator to pursue meaningful literacy instruction over the adopted curriculum gave Donna the courage to stretch the boundaries of her traditional lessons. For example, Donna decided to design a science lesson where students discussed a topic (favorite type of energy) and used that conversation to organize their thoughts into a central idea and supporting details. The students collaboratively wrote their persuasive text, then later presented their writing in a class wide debate about the topic. Although this lesson did not fall within the traditional lesson plans for learning about types of energy, Donna's creative approach to this topic built the students' content knowledge while also engaging her students in developing their persuasive speaking and writing skills. Through our conversations, Donna found the courage to take action steps in her inquiry that moved beyond the confines on her literacy curriculum.

Self-Direction: Taking Ownership of Inquiry

In alignment with the purposes of practitioner inquiry, I designed the study to center the early career teachers' knowledge, needs, and interests. Specifically, I encouraged the ECTs to select their own inquiry topics, to explore professional learning resources, and to decide which practices to experiment with in their literacy classrooms.

While I collaborated with the teachers to co-construct their inquiry questions, the ECTs were responsible for determining a course of action and taking next steps. This sense of ownership was evident in the ways that each teacher built on our discussions to select and implement literacy practices that worked best for their classroom and students. For example, Sally began her inquiry introducing mini-extensions for fast finishers, such as practicing writing letters after completing a short task. She soon realized that some of her students needed more differentiated support. Sally reached out to a new professional learning community, a Kindergarten teacher Facebook group, which gave her the idea to create a CVC spelling activity for some of her students. Sally's pursuit of new ideas for her classroom led her to a supportive and encouraging new community.

Donna also took ownership of her inquiry into how to increase student motivation and engagement in the writing process. After we discussed the value

of sharing one's writing, Donna used Seesaw, a web-based classroom tool, to allow students to share their writing with the entire class. Donna provided directions for how to give appropriate feedback, so the students were able to read others' writing, post comments, and receive feedback from their peers. By taking advantage of classroom technology, Donna was able to expand the traditional "author's chair" to create space for all the students to share their writing at once.

Kelly was focusing her inquiry on how to create more structure for her weekly phonics instruction. I shared a template for a weekly routine with Kelly, which she modified to accommodate frequent interruptions, such as district benchmark tests and state assessment practice. Although she was not able to adopt the complete phonics routine, Kelly said she felt more intentional in her instruction. Specifically, she was more consistent about revisiting elements from her phonics lessons during her small group reading instruction and regularly using dictation practice to quickly assess students' mastery of a new skill.

The ECTs also demonstrated ownership of the inquiry process as they decided when to move on to the next inquiry topic. In our frequent reflective conferences, I always asked the teachers if they wanted to continue their current avenue of exploration, or if they felt it was time to move on. Sometimes the teachers chose to move on for natural reasons, such as when Sally's Kindergarten team finished alphabet bootcamp, so her inquiry related to that aspect of her curriculum was no longer relevant.

Sometimes the teachers changed their inquiry topic to address the needs of their students. Although Kelly's students were initially engaged in her "What I Want Wednesday" choice board during independent work time, their excitement waned after a few weeks. Kelly decided to shift from an inquiry focused on independent work to an exploration of how she could increase partner and team collaboration while she met with small groups. It took a few weeks to find the best routine, but eventually Kelly's students were engaged in a range of self-selected independent and collaborative activities.

Donna spent six weeks investigating ways to support students' identities through the writing process before she felt ready to move on to a new topic. Although Donna felt that she could continue to explore this topic, she wanted to shift her focus toward the more urgent need of increasing the students' motivation and engagement during writing time. Additionally, her grade level curriculum was shifting to a focus on expository writing in preparation for the state assessment. Donna planned to continue to encourage students to rely on their own knowledge and experiences as they wrote informational texts.

Each of the ECTs demonstrated their ability to select and implement practices that improved their literacy classrooms. By having the freedom to explore resources,

experiment with new practices, and determine how long to stay with a topic of inquiry, the teachers built confidence in their level of expertise as literacy teachers.

Tensions in Balancing Facilitation & Self-Direction

In order to increase teacher ownership during the practitioner inquiry process, I had to loosen some of my vision for the research collection process. Since the goal of practitioner inquiry is to illuminate the voices and experiences of the teachers, I sought to center the experiences of the ECTs while navigating the balance between providing support and creating space for teacher ownership.

One example of this tension was the lack of concrete student evidence to support the teacher's inquiry cycles. In the planning process for an inquiry cycle, each teacher and I discussed artifacts that could serve as evidence of student learning and the teacher's preferred avenue for collecting that data. However, the teachers were inconsistent in collecting and sharing this data. Instead, the teachers preferred to rely on anecdotal stories from their classrooms and their perceptions of change within the classroom as evidence of shifts in practice. While I collected observational data during classroom visits, the lack of student data meant that I had to rely more heavily on the teachers as knowledgeable experts in their classrooms. I chose to not pressure the teachers to be more rigorous in their data collection due to the unusual demands and stress placed on teachers by the COVID-19 pandemic, such as social distancing protocols, masking, and providing in person instruction at the risk of their own health. I would have preferred more student work samples, but I chose to use other forms of data and to trust the teachers' judgements about their inquiries.

Another area of tension was the use of professional learning plans (PLPs) throughout the semester. I designed the professional learning plans as a collaborative, co-constructed tool for sharing resources, questions, comments, and artifacts. Although the teachers had editing access, I was the only one who added information to the document. The teachers all regularly referred to the PLPs to review and access resources, but they did not use it as an interactive tool.

At the end of the semester, the teachers suggested alternative ways to use the PLPs. Both Donna and Sally suggested that PLPs would be a helpful planning document to use with a colleague or grade level teams. Donna mentioned that it could help to guide a grade-level focus for a unit or topic. She said, "[I could] specifically gear my instruction for the entire six weeks to focus around a goal that I've decided for this program." Similarly, Kelly mentioned that a PLP could be built with the support of both her team and a campus instructional specialist. As a collaborative document, the entire team could collect and share resources related to an area of focus. Although these tensions ebbed and flowed throughout

the semester-long study, the ECTs and I were able to find a balance between their growing self-efficacy and their need for accountability and support.

Discussion

As ECTs build their professional identity along the continuum from pre-service to in-service learning (Feiman-Nemser, 2001), they benefit from models of literacy professional learning that empower them as knowledgeable agents of change within their classrooms. Practitioner inquiry is an exceptional pathway for ECTs to use their expert knowledge of their classrooms and students as they select topics, examine their practices, determine learning goals, and take steps toward more equitable literacy learning.

Facilitators, such as literacy coaches, play a valuable role in scaffolding ECTs from a project view of inquiry toward an inquiry stance that embraces dissonance and seeks to dismantle ineffective and inequitable practices (Cochran-Smith & Lytle, 2009). Slavit and Nelson (2009) observed that teachers may need assistance to "explicitly surface, confront, and take action upon the dissonance created by identifying gaps between a vision of high-quality teaching and the actuality of student outcomes" (p. 4). Facilitators can bridge this gap by serving as experienced, supportive, and trustworthy partners for those new to the inquiry experience. Without impeding ECTs' ownership of their inquiry cycles, facilitators can come alongside teachers to provide accountability, offer structures for productive inquiry, locate resources, explore data, and support the implementation of new practices (Slavit et al., 2009).

ECTs benefit from the support of facilitators when learning to critique and problematize inequitable structures. Foundational to practitioner inquiry is the exploration of inequity within schooling structures. However, ECTs may not be equipped to challenge structures, practices, or curriculum without assistance. Hines and Connor-Zachocki (2015) noticed that teachers built self-efficacy in reading instruction through their inquiry processes, but they did not critique the standardized tests that were used to determine student learning outcomes. In their inquiries, Kelly and Donna discussed how preparation for the state assessment impacted their inquiry, but they did not critique these practices. This was evidenced in how Kelly modified her phonics routine to accommodate regular test practice sessions. Similarly, Donna moved on from exploring students' identity through writing in part because she felt pressured to focus on preparing for the state writing assessment. Since ECTs may not be prepared to critique literacy practices, it is essential that facilitators or literacy coaches are available to push the teachers to think more critically about inequitable structures within language and literacies (Fecho & Allen, 2005; Hicks et al., 2018).

Conclusion

Literacy leaders and campus administrators should utilize practitioner inquiry to equip early career teachers to effectively identify and respond to areas of dissonance within their literacy classrooms. In order to enhance the inquiry process, literacy coaches and instructional specialists should scaffold ECTs' inquiry while empowering them as experts in their classrooms. Through facilitated practitioner inquiry, early career teachers can develop the knowledge and skills to provide equitable, responsive literacy instruction.

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Appendix

Professional Learning Plan Template

Name:		
Date:		
Version:		
Problem of Practice: (area of concern observed in the classroom)		
Inquiry Question:		
Resources:		

Kind of Professional Learning	Purpose	Location/Time
Online Training Module Twitter Chat Webinar Facebook Group Other ___		
In Person District Session Region Session/Conference Peer Observation Peer Feedback Student Feedback EdCamp Other ___		
Independent Podcast Blogs Book Study Academic Article Lesson Self-Analysis (Video) Daily Journaling Other ___		
Evidence Tools	**Purpose**	**Date to be Collected**
Reflection Journal Lesson Plans Observation Form Feedback Form Student Work (what kind?) Student Data (what kind?) Engagement Data Other_____		

IMPLEMENTATION OF CREATIVE PRACTICES IN INTERNATIONAL LITERACY CLINICS

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Abstract

Literacy educators provide valuable learning support through instruction in literacy clinics across the world. This study expands on extant inquiries into practices used in global university clinic partnerships to highlight creative and innovative instructional support practices. Findings centered on the use of critical thinking, flexibility and responsiveness, and ways for engaging learners and families. Recommendations for clinical practice including techniques which enhance student learning outcomes are discussed. Instructional interventions utilized by clinic professionals within international contexts are highlighted.

Keywords: creative instruction, critical thinking, engagement, flexibility, international, intervention, instructional support, literacy clinics, reading clinics, university tutoring, teacher preparation

Introduction

Literacy clinic experiences are a long-standing tradition and an important part of university teacher preparation programs (Cuevas et al., 2006; Ridout & Bailey, 1987; Rosner & Cooper, 1982). Historically, university-based clinics provide

opportunities for pre-service teachers and those seeking advanced degrees in literacy education to conduct diagnostic assessment and deliver individualized instruction tailored for students who are having difficulty in developing literacy skills (Laster et al., 2022). University-based reading clinics in the United States provide intervention in a variety of formats (Pletcher et al., 2019). From a historical perspective, literacy clinics sometimes embrace a medical model of literacy diagnosis and instruction (Deeney et al., 2011). During the late 1980s and 1990s, other clinics adopted a model of continuous assessment or authentic performance using a portfolio approach (Carr, 2003; Pletcher et al., 2019). Currently, clinics are structured using a variety of models which focus on intervention and student growth. While many countries do offer alternative models for addressing students' learning needs, this study sought to determine how international university clinics provide instruction in an effort to ascertain creative instructional practices in use and share recommendations for how they might be adopted by clinic directors and educators. This work supports Tierney's (2018) perspective that researchers must move from a Eurocentric view to one of global meaning making. This query is part of a larger study and takes an initial step in broadening the perspectives on literacy clinic instruction by sharing practices from different countries around the world.

Literature Review

Many children need specialized support services to gain proficiency in learning to read and write. Literacy clinics associated with university partnerships offer support to learners who need instructional intervention to be successful in the classroom while also offering teaching candidates opportunities to practice their craft and administration of assessments under the supervision of university professors (Laster, et al., 2022; Uwatt & Odey, 2010). Literacy clinics are an exceptional setting for struggling readers to achieve success through the assessment, planning, instruction and evaluation process (Ortlieb & McDowell, 2016). Students who participate in clinic lessons show improvement in critical areas of literacy development including word recognition, fluency and comprehension (Zimmerman et al., 2013). In a study of the Strathclyde University Literacy Clinic in Scotland, researchers found that teaching candidates also benefited from the instructional opportunities offered through literacy clinic experiences (Ellis, 2017). Teacher candidates expressed the benefit of teaching outside traditional school placements in which they had limited freedom to question instructional practices. Through clinic experiences, teacher candidates were able to introduce and test their own ideas for improving literacy skills. Their discussions demonstrated

commitment to social justice and their work in the one-on-one context increased their agency as educators and captured their emotional energy as they imagined new approaches and increased their professional learning. The real opportunity to impact the life of a child makes the use of literacy clinics an ideal instructional approach for enhancing teacher candidate professional identity, knowledge and instructional practice.

Global Perspectives

Extant research has examined the instructional practices utilized in clinic settings and has highlighted the many ways in which educators address students' literacy needs (Ortlieb & Cheek, 2013). However, most available research focuses on the use of clinical approaches in the United States and other English-speaking countries. Ortlieb and Pearce (2013) noted in their study of the characteristics of U.S. literacy clinic directors that while directors valued improving their clinic practices through research, they did not necessarily share their findings in publications. The authors posited that the qualitative case study approach to clinic research may not be as easily published because of a perceived preference for quantitative studies. Additionally, the findings of clinic studies may not be relevant to all clinics because of the variability in clinic programming. There is an even more limited understanding of practices utilized in international clinic settings with some international literacy experts advocating for the use of a medical model approach to address language remediation needs as recently as 2010 (Uwatt & Odey), almost a century following the establishment of the first clinic in the United States at UCLA in 1921 (Smith, 2002).

Further research on practices employed in different countries related to intervention and literacy clinic practices would provide strengthened opportunities for reciprocal learning across global contexts. The current research study takes this lens into account through seeking understanding of how literacy intervention and clinics are utilized currently with an eye toward expanding the work to create an aspirational space "where cross-cultural meaning making can happen in multiples and proceed in a manner that is responsive, respectful, relevant, and energizing" (Tierney, 2018, p. 411).

Creativity in the Literacy Clinic

Creativity is an essential component of literacy instruction as it encourages critical thinking and enhances student engagement in lesson activities. Nelson & Johnson (2014) suggested that creativity and learning semiotically relate and note "they are inextricably intermeshed, cognitively, socially and materially" (p. 3).

The need for a pedagogy incorporating the three interrelated elements of creative teaching, teaching for creativity and creative learning was proposed by Lin (2011) to enhance creative development. Creative teaching focuses on the role of the educator and their ability to use approaches to make learning effective and interesting. Literacy clinics that employ creative pedagogical activities and are flexible in modifying instructional practices to meet the needs of students offer essential practices for student growth in literacy learning. Ortlieb et al. (2012) noted that reading clinical programs can be effective when they promote active engagement and provide practice opportunities using a variety of proven instructional strategies that maintain student attention and enthusiasm.

The increased use of online instruction in contemporary literacy clinics has demonstrated that the instructional procedures that clinics utilized in the past may not be adequate for meeting the needs of today's students. Ortlieb and Cheek (2013) suggest developing a modernized clinic which includes new instructional components such as discussion boards and online journals. The creative and innovative use of technology in literacy clinics is well documented (Laster et al., 2018; Rhodes, 2013; Vasinda et al., 2018). Laster et al.'s (2022) findings acknowledge that the COVID-19 pandemic required creative modifications to literacy clinic instruction due to the world-wide change in instructional modality. These types of creative teaching approaches were and are essential to the success of literacy clinics in today's changing instructional environments.

Creative teaching and innovation should not be limited to changes in the technology utilized for instructional purposes. Multiple researchers have explored changes in clinical practice related to core literacy competencies such as comprehension, vocabulary development and fluency (Ortlieb & McDowell, 2016; Ortlieb et al., 2014; Zimmerman et al., 2013). Creativity in modifying clinical instruction outlined in research studies such as these is a sought after educational innovation, but is systematically difficult to implement in classrooms (Patson, 2021). This study utilizes a global lens to analyze data obtained through interviews with university literacy clinic directors and faculty to determine how creative ideas are moved into innovative practices within international literacy clinics.

Methodology

The current inquiry is part of a larger ongoing study that seeks to provide a broad overview of how university literacy clinic partnerships in different countries support learner success. University literacy educators at eight institutions

in five countries (Ireland, Chile, Canada, Australia, United States) participated in this portion of the qualitative research study. In the first year of the study, the research team developed an interview protocol to investigate a wide range of clinic practices around the world. The initial research document was refined through detailed feedback provided by literacy experts in four countries to ensure sensitivity and queries that would provide rich, descriptive data. Additionally, the revised protocol document was presented at two research conferences in 2021-22 to obtain feedback. The collected feedback resulted in an additional tier of revisions to strengthen the instrument and broaden its focus from the elementary grades to K-12. The interview protocol was organized around several categories of questions including: Demographic Information; Instructional Support and Intervention; University Reading/Literacy Clinics; Structure of Intervention Programs and University Faculty Responsibilities; Assessment and Instructional Practices; Family and Community Support; and College Student (Teacher Candidate) Learning. In the second year of the study, following the final revisions, the research team received Institutional Review Board approval for the updated protocol and subsequently began the data collection process. Initial interviews were conducted with four international university level participants to investigate the intervention practices conducted with elementary and adolescent students.

Participants were selected from publicly available literacy clinic study group and research team listings to ensure representation from diverse countries. Additionally, further participants were recruited utilizing the Exponential Non-Discriminative Snowball Sampling method (Anieting & Mosugo, 2017). Subjects with expertise in literacy clinics, university partnerships, and intervention methods located in four countries were selected for this initial sample. The full study will increase in sample size to encompass additional participants from both English and non-English speaking countries. The current participants provided information on practices for literacy support programs in Australia, Canada, Chile, and the United States. All participants were employed by universities and three of the participants were responsible for directing clinics. The participants provided information on clinics based in public schools where teacher candidates provide instruction to elementary and adolescent students within the school building, clinics hosted on campus and in non-profit settings as well as tutoring programs provided by the public school system. While participants did not describe specific reading difficulties experienced by children served in their programs, they did note that children with special needs and children learning second languages received literacy instruction. This project builds on the existing

knowledge base by describing the creative ideas and practices utilized in international literacy clinics. The guiding research questions were:

- What innovative instructional practices are occurring in international literacy clinics and how are they adopted by teacher candidates?
- How are creative instructional ideas translated into innovative practices in international literacy clinics?

For this inquiry, qualitative interviews lasted 45-60 minutes and were conducted individually with participants utilizing Zoom as a platform to gather in-depth descriptions of literacy clinic instructional practices. Next, the interviews were transcribed and analyzed using the constant comparative method described by Olson et al. (2016) to seek evidence of creativity and innovation. The research team members coded data individually and then met together to confirm the codes. The codes were synthesized to create themes, seek descriptive quotes and analyze instructional practices. Member checking and respondent validation was used by the researchers to improve the accuracy, credibility and validity of the study.

Findings

Conducting research on literacy clinics provides educators the opportunity to examine practices related to student assessment and intervention, teacher preparation programs, and classroom literacy instruction. All study participants described some essential clinic elements they found useful in an intervention focused literacy course or program. These essential elements included a focus on using assessment data to inform practices, modeling effective teaching practices, exploring implementation of literacy practices, lesson planning and literacy coaching and supervision. Although there was some commonality amongst participants in coverage of essential topics, there was great variance in the format utilized and structure of the course and accompanying field experience and the amount of time spent working with children or adolescents. One section of the interview protocol specifically addressed teacher candidate learning and the practices being utilized in clinic instruction. An additional interview question investigated the "secret sauce" or creative and imaginative approaches that build success for that university's program and encouraged participants to share advice with other literacy clinic faculty.

As these data were analyzed, three key themes emerged to address the types of instructional practices occurring in international reading clinics. Reading

faculty emphasized the use of practices which encouraged higher level and critical thinking of both tutoring students and college candidates. Instructors described the importance of flexibility and responsiveness as a leadership attribute for literacy clinic directors and education faculty. The last theme that was illuminated examined the use of engaging practices for both learners and families. Each of these themes will be described below.

Practices which Promote Critical Thinking

Literacy clinic directors reported that they engaged in a variety of practices to support the critical thinking of both tutoring students and teaching candidates. Critical thinking occurs when a learner imagines, explores, synthesizes, connects, discovers, invents and adapts (Vinton, 2018). Literacy clinics and other classroom spaces provide an opportunity for learners to apply critical thinking in rich conversations (Harvey & Daniels, 2015). Learners can participate in analytic and reflective thinking and view the world from a variety of different perspectives (Goudvis et al., 2019).

Study respondents described the inclusion of practices which promote critical thinking such as teacher candidates' individual reflection, inquiry groups and project-based learning within the reading/literacy clinic. Teacher candidates in one setting were asked to reflect not only on what they learned about their student, "but what they learned about themselves as an instructor" utilizing a double entry note taking template. Directors reported using inquiry and project-based learning to support content knowledge, scaffold literacy strategies, and to encourage real-world applications. One director noted that their clinic program focuses their inquiry project instruction around a theme such as, "How do I make the world a better place where I live?" Project-based learning is defined as a student-centered pedagogy where learners explore personally meaningful projects or answer complex questions utilizing real-world applications (Almulla, 2020). Strategies which promote critical thinking were adopted by teacher candidates to try with a tutoring student and also to apply in future classroom settings. These practices encourage conversations and deep thinking to foster learner ownership and independent thinking.

Inquiry groups engage tutoring students through making real-world connections while participating in exploration and use of higher-level questioning (Goudvis et al., 2019). In this research study, one participant described the utilization of a small group format at the end of each tutoring session. Candidates worked individually with children for a large block of time to individually tutor (typically 45-60 minutes) and then joined collaborative small groups of 3-4 tutoring students for the remainder of the session (20-30 minutes) to provide

students the opportunity to read and write about a topic of choice. Teacher candidates had an opportunity to collaborate with peers while learning about disciplinary literacy, implementing comprehension strategies, text engagement and how to foster oral language and text discussion (Duke et al., 2021). The tutoring students may have benefitted from the varying intervention formats including both individual and small-group learning (Begeny, 2019).

One participant described the utilization of a project-based approach to focus on tutoring student interests and experiences. This participant asks university candidates to explore topics which are personally meaningful through reading and writing and create a project which includes a product which can be shared with others. The product demonstrates application of literacy techniques to solve real-world problems. For example, a small group of first grade learners explored how service pets support community helpers. Creative instructional activities such as these encourage critical thinking for relevant purposes.

Flexibility, Coaching, and Responsiveness

Study participants reported that flexibility and responsiveness were essential dispositional characteristics for all members of the literacy clinic community. Teaching candidates must be flexible and responsive to the needs of the individual learner. Community members (e.g., families, partnership leaders, school administrators) often are involved in the process of supporting learners in partnership with clinic leadership. Literacy clinic directors described the positive nature of forming partnerships with community organizations and the importance of working together in a responsive and flexible manner.

Research participants discussed the link between analyzing assessments and using data to inform instruction. Developing teachers are often overwhelmed by the complexities of the classroom environment and all that they are learning and need to build teacher efficacy and resiliency (Gratacós et al., 2021). The literacy clinic, or related field experiences, can provide an opportunity for educators to learn about pedagogy and to also practice teaching and assessment techniques with coaching and support while they engage with a child or adolescent to offer literacy instruction. An effective leader or clinic director working in pre-service and in-service teacher education can coach flexibly to model and scaffold instructional practices.

Clinics are also a place to explore creative approaches to instruction which could facilitate an active learning environment. Opportunities to engage in conversations about what is working well and what could lead to enhanced learning outcomes are essential for accelerated achievement. Whether guided by an on-site coach or university faculty member from afar, participants reported a desire to build reflective practice and expand understanding of literacy practices. This approach

for engaging in reflective practice could then be emulated by teaching candidates. One participant described weekly "look fors" that tied to course readings and/or course topics. Other participants discussed the value of reflective practices that took place during classroom sessions. As tutors implemented lessons and watched classroom instruction, they also gathered information which reinforced student learning. Sometimes teacher candidates encounter practices which are counter to best-practices or not as effective as another instructional approach. These "non-examples" guided candidates to reflect on teaching practices and strengthen beliefs about how to engage learners. Classroom experiences which were responsive to the needs of learners and flexible enough to facilitate questions and "in the moment" learning was acknowledged.

The literacy clinics described in this study had a variety of formats for instruction which included a combination of virtual and in-person experiences. Regardless of format, participants described lesson planning and learning about various assessments as key components of the intervention courses in which clinic experiences were incorporated. For instance, one international colleague described how they translated assessments from around the world to ensure that teaching candidates were able to assess specific reading and writing components. This faculty member provided an innovative view of global assessments. The participant described broadening "the availability and scope of assessment tools" through translation of available international assessments. Thinking flexibly and creatively in this manner is an essential need in today's literacy clinics.

Engaging Learners and Families

How important is engagement for international literacy clinic directors? During 'coding and data analysis, engagement in learning was a theme which quickly saturated and provided opportunities for rich qualitative description. Participants explained that learner and family engagement were critical when developing instructional and assessment practices. One respondent noted that they were able to secure grant money to support family involvement for their clinic participants, a critical activity during the pandemic.

Engagement of the learner is defined as the involvement of a student's cognitive and emotional energy to complete a learning task (Halverson & Graham, 2019). Student engagement also correlates with academic achievement/outcomes, satisfaction, persistence and building a sense of community (Halverson & Graham, 2019). Participants noted several ways in which they built learner engagement by including games, technology, and a variety of instructional materials.

Utilizing a game format during clinic sessions was one way to build engagement for student learning. Whether children were playing vocabulary games or

practicing phonics features, games provided competition and an active environment which increased the enjoyment and fun within the clinic sessions. Another commonality identified by all study participants was embedding technology into the literacy clinic. The use of iPads, apps, videos and books in a digital format provided opportunities for multimodal learning and for student-led research. One participant noticed the reliance on mobile phones by students and parents from lower socio-economic communities, particularly during the pandemic. Parents and families accessed reading materials, websites and educational apps for literacy learning introduced during reading clinic lessons. Respondents described using a variety of "texts" including fiction and nonfiction across the genres as well as the use of multiple types of digital text in their programs. The incorporation of digital text from three different vendors was utilized in one clinic's tutoring sessions with two of the three resources selected based on partnering school system recommendations. One clinic director described an infographic assignment in which tutors created an inviting visual to encourage families to participate in engaging literacy activities at home. This document was sent home to be displayed on a refrigerator and included book titles, learning strategies, websites, and activities that aligned with learner interest. Additionally, this assignment served as a model where teaching candidates practiced interactions and communication with family partners. One director noted that they specifically taught the Technological Pedagogical and Content Knowledge (TPACK) framework for integrating technology into instruction (Mishra & Koehler, 2006). Many literacy clinic directors discussed 'modeling' as an opportunity to show candidates how to use learning tools or assessment data. Whether this instructional modeling was through case studies of learners or discussion of clinic artifacts, instructors used "thinking aloud" to demonstrate practices. Thus, the clinic directors served as mentors and coaches for education candidates through showcasing and modeling the effective use of teaching techniques. All participants described some form of modeling as an opportunity to build learner engagement. As one participant stated, "... during the tutoring, I give them coaching and feedback on strengths, and then give them some ideas, what they might do next, or prompt them to think more critically about the instruction being provided after the session."

Discussion

Although the sample size for this study is small, the findings illuminate the perspective that there may be a set of core or essential practices that university faculty employ frequently across global contexts. Similar to Pletcher et al.'s (2019) research on clinics in the United States, the international clinics utilize assessment

to create instructional activities geared directly to student needs, engage families and support development of teacher candidates through hands-on experiences. One participant described the relationships created in clinic settings as a "win, win, win" noting, "that the student wins, obviously wins getting support…the community or the school board wins, because they're getting support and then the tutors…get valuable experience."

This study specifically identified techniques and approaches related to designing and implementing academic interventions in literacy clinics. Faculty interviewed for the study described a strengths-based approach for both tutoring to increase student learning as well as a growth or resiliency model which supported teacher educator knowledge. The teaching, assessment techniques and reflection activities described promoted critical thinking. Clinic tutors were expected to consider how their observations of student performance led to developing the next instructional activity. Faculty ask questions such as, "…what are you going to do now? What do you propose? How's this going to inform your practice?" Engagement of both students and families in literacy clinic activities was important for these programs. Most techniques implemented were experiential in nature and supported increased content area knowledge through active learning opportunities.

The creative techniques utilized by the participants in this study can serve as a basis for enhancing clinic practices throughout international literacy clinics as well as traditional classroom contexts. Instructional activities such as the project-based learning activity discussed earlier could be conducted at the start of a unit of study in clinics or classrooms to increase knowledge as a variety of texts are explored through subsequent reading and writing. The increased use of a variety of digital texts as well as the inclusion of games and hands-on activities to encourage student engagement shared in discussions between clinicians and university faculty can improve instructional outcomes for readers who need support. The information shared by the study participants showed that creative ideas and effective instructional practices do bleed across national boundaries. More than one participant noted the use of similar assessments and clinic structures. In some cases, instructional procedures, like the use of books like *Words Their Way* (Bear et al., 2019), were used by clinic directors in more than one country. Sharing resources that are effective across boundaries can assist in improving literacy instruction within clinic settings.

Limitations

The current sample, while an appropriate size for a qualitative study, provides a narrower view of world-wide literacy clinic practices. Therefore, the obtained results do not represent all international university literacy clinics.

The information presented may not be representative of clinical programs that have multilingual directors since all participants completed interviews in English. The COVID-19 pandemic had a significant impact on instruction in literacy clinics with some participants noting challenges faced with clinic activities and one participant sharing that public schools increasingly reached out for support for local tutoring programs because of learning loss during this severe medical emergency. Educational policies in each of the countries represented in the study impacted the types of instructional practices and materials utilized and may have impacted the ability of educators to implement creative instructional practices.

Further Research

Additional research is needed to more broadly examine intervention practices in various international contexts. Further queries, particularly those that broaden the number of participating countries with diverse linguistic backgrounds, would be especially beneficial in expanding understanding of creative instructional techniques available for use in clinic settings. Further research designed to look at how teacher candidates apply the techniques learned in clinic settings to their future practice experiences and their own classrooms would allow international literacy educators to learn which of their creative instructional practices fully translate from clinic to classroom. Additional research in this area should also ascertain the effectiveness of the instructional activities used in literacy clinics. This work can serve as an impetus for further conversation in the field about essential clinic practices in global environments. Through these research efforts student achievement can be enhanced as educators learn from each other in a reciprocal manner across countries, university settings, and varying educational contexts.

Conclusion

This qualitative research study sought to tell the story of how creative instructional intervention techniques and approaches are utilized in international literacy clinics. The findings offer insights for literacy clinic personnel interested in intervention practices adopted globally, particularly newer practices that demonstrate the use of creative ideas and innovation. A thoughtful review of international practices can enhance teacher candidates' knowledge and provide insights for worldwide clinic directors. The collection of instructional ideas and intervention practices which promote critical thinking, flexibility, and engagement herein provide a needed global perspective on literacy clinics.

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TRAUMA-INFORMED GED PREP PROGRAMS: A NEW PATH FORWARD

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Educational Outcomes

Abstract

This investigation focused on adult literacy learners exposed to traumatic events. Analyzing ged.com pretest scores for Cohen's d effect size in specific ged.com subject matter pretests in a Texas-based non-profit's trauma-informed GED prep program. Further evaluation of individual ged.com pretest subjects sought additional effects and/or practical significance via one-way ANOVA. The analysis supports assumptions that trauma-informed literacy practices created a large effect on ged.com pretest scores for students in their trauma-informed GED prep program. Additionally, those students showed significant growth in ged.com pretest scores between pretest and posttests. Further, positive results were present in the one-way ANOVA analysis as well.

Keywords: Trauma-informed literacy; Trauma-informed education; *Felt Safety;* GED prep programs; Student-teacher; Andragogy; Critical Literacy; Trauma; *ged.com* pretests.

Introduction

According to the U. S. Department of Education, 54% of American adults, 16-74 years old, or about 30 million people lack proficiency in literacy, reading below the equivalent of a sixth-grade level (Nietzel, 2020). Learners who have faced traumatic episodes are likely to be included in this bitter statistic. Adult learners who have had traumatic experiences, either simple or complex, face a

raft of issues associated with reduced educational outcomes including deficient economic outputs resulting in generational or situational poverty, homelessness, or constricted health options (Emdin, 2016; Jensen, 2009 & 2013; McInerney & McKlindon, 2014; Newkirk, 2009).

Seventy percent of all children who have lived in poverty will drop out and low-income families are five times more likely to leave school than their wealthier counterparts (Alliance for Excellent Education, 2008; Chapman et al., 2011; Fukuyama, 2011; Hernández, 2012; Jensen, 2013). Wilkinson and Pickett (2009) admonished that inequality breeds social dysfunction and that "social problems, including mental illness, violence, imprisonment, lack of trust, teenage births, obesity, drug abuse, and poor educational performance of school children, are also more common in more unequal societies" (p. 493). Additionally, children who have suffered through homelessness "have developmental lags, delays in physical, social, cognitive, and language development" (p. 21). In adults, this can lead to depression, feeling overwhelmed, or the inability to cope often becoming hereditary and cross-generational with impacts passed on from parent to child (Martin, 1991; Nievergelt et al., 2019; U.S. Department of Education, 2016; Zajacova, 2012).

This investigation focused on issues related to an array of factors termed traumatic, encompassing emotional, physical, and sexual abuse, neglect, homelessness, and poverty, and linked these potential difficulties, to the participant's ability to make progress in a TXGED program which focused on non-traditional and marginalized students. This work, by providing a broader understanding of the trauma-informed phenomenon, seeks to provide a trauma-informed literacy practices blueprint for educators inhabiting learning spaces where this menace exists.

What is Trauma?

Trauma is defined as "an event, series of events, or set of circumstances that are experienced by an individual as physically or emotionally harmful or life-threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being" (SAMHSA, 2019). These *events* often result from learners having been exposed to a disparate sampling of negative experiences such as aging out of the foster care system, refugee displacement, sex trafficking, homelessness, or generational or situational poverty. "Early life adversity is a major risk factor for the development of psychological and behavior problems later in life" (Baracz & Buisman-Pijlman, 2017).

What is Trauma-Informed Literacy?

By addressing the very real barriers to educational growth presented to learners due to trauma and its effects, teachers can begin to open pathways to student empowerment, fulfillment, and advancement that might otherwise remain closed. Providing teachers and associated staff with a better understanding of trauma's effects on the learning process and how to combat those effects is a critical issue in literacy spaces. Prominent examples highlighting the criticality of this issue include the United Nations' Millennium Development Goals which made universal education a key component as well as major foundations such as The Ford Family Foundation and The Bill and Melinda Gates Foundation, each, have policy initiatives promoting education on trauma's effects on literacy. Further, many states, among them Illinois, Vermont, and Wisconsin have passed legislation concerning trauma-informed practices specific to schools. The State of Texas, in 2019, passed Senate Bill 11 which "proposed rules to assist and guide local education agencies (LEAs) in implementing the Safe and Supportive Program (SSSP) and trauma-informed care training" (Maul, 2017; Texas Education Agency, 2020; The Bill & Melinda Gates Foundation, 2020; The Ford Family Foundation, 2019; United Nations Development Programme, 2020).

Trauma-informed literacy is closely related to the broader field of trauma-informed education with origins in both the medical profession and the judicial system (McInerney & McKlindon, 2014). Scholarship has frequently discussed trauma's effects on a person's physiological or psychological well-being and extrapolated those effects onto students in learning spaces (Child Welfare Information Gateway, 2015; Cunningham, 2004; Hambrick et al., 2019). The SAMHSA (2018) created a set of best practices for professionals working with clients exposed to traumatic experiences including [felt] safety, trustworthiness and transparency, peer support, collaboration, empowerment, voice, choice, and an emphasis on cultural, historical, and gender issues.

The relationship between trauma's effects, both mental and physical, on the individual are directly related to their ability to perform in classroom spaces (Brunzell, et al., 2016a). Ten million children are exposed to some type of traumatic event each year and schools across the country are populated with these learners (SAMHSA, 2019). Trauma causes a multiplicity of effects, including the inability to embrace complexity, loss of creativity, and the inability to listen (Sizemore, 2016). Finn (2010) intimated that PTSD caused headaches, difficulty with concentration, and beginning new tasks. Each of these trauma-related effects works to the detriment of educational empowerment and positive literacy-specific outcomes. Craig (2016) pronounced: "Trauma is not just a mental health problem. It is an educational problem that, left unaddressed, derails

the academic achievement of thousands of children" ("Forward" section). The research question and sub-question are analyzed here:

> 1. What effect, if any, does the use of trauma-informed literacy practices have on multiple adult GED students' *ged.com pretest* scores in each subject matter tested?
>
>> a. What effect, if any, does the use of trauma-informed literacy practices have on adult GED students' *ged.com pretest/posttest* scores by subject? *ged.com pretest* subject matter areas to be examined are math, reasoning and language arts, science, and social studies.

Theoretical Framework

Vygotsky (1978) centered his worldview on concepts associated with two of trauma-informed literacy's prominent tenets. One, the creation of felt safety by promoting cultural change in learning spaces, and two, advocating for student-teacher relationships. He advised that students who are inculcated in a rich, warm, healthy, and supportive environment (*felt safety*) will thrive. Additionally, he maintained that changes in the cultural forms of behavior could be changed during development. Additionally, he emphasized that with the internalization of new cultural norms behavioral transformations could occur as well, stating: "the mechanism of individual developmental change is rooted in society and culture" (p. 7). It is asserted here that culture can be macro, cities, countries, civilizations, or micro, on the school or classroom level. His theories are centered on the creation of a new cultural norm where students could begin to move away from trauma and its effects.

Literature Review
Trauma-Informed Literacy Practices

Teachers, volunteers, and administrators with a broad understanding of key trauma-informed practices such as strong student-teacher relationships and creating safe spaces should expect several positive outcomes in students and their broader learning community (Baker, 2006; Dods, 2013; Dutro & Bien, 2014; Ennis & McCauley, 2002; Krstic, 2015; Livingstone et al., 2014; Schwartz, 2019; Terada, 2019). Moreover, classrooms across the U. S. are in critical need of trauma-informed literacy interventions to better empower learners. Many teachers have faced the challenges of educating trauma-affected students, students who present a range of symptoms and behaviors including attention-deficit

hyperactivity disorder (ADHD), peer bullying, school refusal, conduct, and oppositional defiance disorders, distracted or aggressive behavior, limited attentional capacities, poor emotional regulation, and/or hypervigilance (Alisic, 2012; Brunzell, et al., 2016a, 2016b; Koso & Hansen, 2006). Trauma-informed literacy practices vary depending on the practitioner and the learning space. However, they follow critical templates, among them, basing a school's culture firmly on understanding and responding to trauma, creating felt safety in all learning spaces, strong professional development in social-emotional learning (SEL), and dynamic student-teacher relationships (Alisic, 2012; Soma, 2017; Venet, 2018).

"Trauma-informed approaches include programs, organizations, or systems that realize the impact of trauma, recognize the symptoms of trauma, respond by integrating knowledge about trauma policies and practices, and seeks to reduce traumatization" (Maynard et al., 2019, p. 1). Trauma-informed care in non-literacy fields such as medicine, psychology, and social work coalesced only 30 years ago (Wilson et al., 2013). However,

> "In the last ten years awareness of the importance of developmental trauma and "adverse childhood experiences" in mental, physical, and even societal health has spread . . . from a relatively small group of clinicians and researchers into public systems and to the lay public. Public and private systems in education, child welfare, hea[l]th, mental health, and more are implementing "trauma-informed" . . . initiatives" (Perry & Szalavitz, 2017, pp. xvi-xvii).

Trauma-informed literacy and its attendant output; non-peer-reviewed articles, blogs, vlogs, books, and Internet contributions are rife with titles that have the words "how-to," "strategies" (Trauma-informed Teacher, 2019, March & 2019, July) and "things you need to know" (WeAreTeachers, 2020) as well as "a glimpse inside" (Schwartz, 2018), "observations" (Phifer & Hull, 2016), and finally "what if" (Downey, 2018). Additionally, there is a thriving and prolific genre of professional and semi-professional writing associated with the subject. *Sesame Street*, the beloved children's program has created programming and workshops that have discussed trauma-informed education (Beck, 2019). The show has also used developmental psychologists for kids' shows such as *Mister Rogers' Neighborhood*, and *Blues Clues*. Webpages, such as National Public Radio's (NPR) *Mindshift* frequently post trauma-informed articles associated with a diversity of topics among them *How Making Music Can Help Students Cope with Trauma* (Fraga, 2019) and *Playing Teen Sports May Protect from Some Damages of Childhood Trauma* (Neilson, 2019).

Trauma-informed literacy interventions are becoming more understood as necessary components of an organization's response to their trauma-affected learners. However, the ubiquity of trauma-informed interventions belies the struggle with assessing their efficacy. A call for more research associated with system-level outcomes is necessary to advance the field (Franklin & Streeter, 1995; Maynard et al., 2019; Powell, 2018). Berger (2019) declared that "the relationship between trauma exposure and impaired school-related functioning, . . . is well established" (p. 650) and . . . that the relationship between trauma and "lower academic achievement and test scores, lower IQ scores, and impaired working memory, and delayed language and vocabulary" (p. 650) existed as well. However, her systematic review of trauma-informed care in schools found little evidence of a sustained evaluation of trauma-informed programs and discovered "limited and no systematic review" (p. 650) of evidence created by these programs.

Promotion of Strong Student-Teacher Relationships

Student-teacher interactions and their potential for reducing the barriers erected by trauma were critical to this project. The academic literature is replete with the efficacy of creating strong student-teacher relationships (Baker, 2006; Ennis & McCauley, 2002; Korbey, 2017; Krstic, 2015; Livingstone et al., 2014; Schwartz, 2019; Staufenberg, 2018). Krstic (2015) ". . . indicated that children's well-being in school and the emotional quality of teacher-student interactions are fundamental for school adjustment, learning, and achievements" (p. 167-168). Korbey (2017) agreed, commenting on her school's attempts to create a new powerful trauma-informed culture: "Every student needs to belong and connect to at least one teacher or one adult in this building every day" (p. 2). A fruitful and caring student-teacher relationship can create a positive dynamic in learning environments. "The nature of a child's relationships [,] both before and after trauma [,] . . . play a critical role in shaping their response to it [and] . . . if safe, familiar, and capable caregivers were available to children, they tended to recover more easily" (Perry & Szalavitz, 2017, p. 70). Intimately knowing how your students interact and react to a literacy-related stimulus can create positivity and reduce barriers (Baker, 2006; Ennis & McCauley, 2002; Korbey, 2017; Krstic, 2015; Livingstone et al., 2014; Schwartz, 2019; Staufenberg, 2018). "Relational features of the educational environment, such as positive teacher-student relationships, are important for students' academic success" (Frelin & Poth, 2018, p. 407). Establishing trust can repair a student's self-image. Students need to feel and believe they are successful learners. Each member of the dynamic benefits from this type of relationship and the diminution of obstacles helps pupils

become more effective in school. Everyday interactions provide the basis for these results, both socially and academically. Trauma is a limiting factor concerning academic achievement and fear of failure can have a disempowering effect on students. Promoting good relations between students and teachers can be important for what students produce in school (Backman et al., 2012; Frelin & Poth, 2018). Additionally, interpersonal behavior, as perceived by students, might be an important if not the most important variable for educational effectiveness (Brok, et al., 2004; Perry & Szalavitz, 2017).

Felt Safety

Learning spaces "where students can freely express their ideas and feelings, particularly around challenging areas such as diversity, cultural competence, and oppression" (Holley & Steiner, 2005, p. 49) are the definition of *felt safety* for this assessment. The NCTSN (2018) touted the necessity of providing ". . . a safe place for the child" to learn (p. 5). *Felt safety* is the watchword for ". . . a classroom climate that allows students to feel secure enough to take risks, honestly express their views, and share and explore their knowledge, attitudes, and behaviors" (Holley & Steiner, 2005, p. 50). Creating a sense of *felt safety* in learning spaces is an effective trauma-informed literacy practice that can be utilized by teachers seeking to mitigate the effects of traumatic experiences on their students. Kerka (2002) intimated that . . . "Traumatic events add extreme challenges to the learning process (p. 1). Creating a safe space where there is ". . . a commitment . . . to creating and sustaining an atmosphere in which the [learner feels] at ease, self-confident, and inspired to speak freely and express their opinions" (Livingstone et al., 2014, p. 302) is a positive step to soothing issues related to traumatic events. Perry and Szalavitz (2017) agreed and noted ". . . traumatized children . . . need predictability, routine, a sense of control and stable relationships with supportive people [and that] . . . creat[ing] consistency, routine, and familiarity, . . . establishing order, setting up clear boundaries, [and] improving cross-organizational communication" (pp. 64-65) is of the utmost importance as well.

Creating a sense of *felt safety* is an overarching goal for the trauma-affected student's ability to move forward in an educational journey. Inuring learning spaces with safety modifies how and how much students learn (Holley & Steiner, 2005). Purvis et al. (2007) described ". . . disturbing behaviors like tantrums, hiding, hyperactivity, or aggressiveness [that are] triggered by a . . . deep, primal fear [due to] past traumas encoded within their brains" (p. 47). They inform that ". . . adults [can] arrange the environment and adjust their behavior so [learners] can feel in a profound and basic way that they are truly safe" (p. 48). Additionally,

they asserted that ". . . when a child feels genuinely safe, the primitive brain lets down its guard and allows trust to blossom and bonding to begin" (p. 49).

Trauma's Effects on Learning

Trauma truncates outcomes for learners of all ages and is inclusive of the diminution of both sociocultural and socioeconomic life trajectories. Learners who have faced traumatic events are often not able to reach adequate education levels and frequently face a lifetime of diminished outcomes as well as poor health and a lack of upward mobility. Maya Vakfi (2019) reported "Trauma can affect a child's behavior and ability to do well at school as well as the overall learning environment for other students if not addressed properly" (p. 5). Additionally, learners who have been exposed to traumatic experiences face "executive dysfunction" (Flaks et al., 2014, p. 32), and there appeared to be a correlation with "negative effects on education" (p. 32). Further, trauma has been shown to affect multiple necessary skills related to success in the classroom; among them, some students are unable to engage in higher-order thinking, they are incapable of perspective and can appear insensitive, have diminished memory, exhibit an inability to sequence events, lack problem-solving skills, often cannot focus, or pay attention, cannot understand cause and effect, and are unable to engage in abstract thinking. Finally, ". . . with prolonged fear there can be chronic or near-permanent changes in the brain [that] may cause an enduring shift to a more impulsive, more aggressive, less thoughtful, and less compassionate way of responding to the world" (Perry & Szalavitz, 2017, p. 69). (Birzer, 2004; Brinkley-Etzkorn, 2016; Brunzel et al., 2016a, 2016b; Caputo, 2005; Carr-Hill, 2020; Chin, 2005; Dutro, 2019; Emdin, 2016; Fisher et al., 2016; Fisher, 2016; Frelin & Poth, 2018; Jones, 2012; Kerka, 2002; Kisiel et al., 2018; Lanktree et al., 2012; McInerney & McKlindon, 2014; Phifer, & Hull, 2016; SAMHSA, 2019; Siegel & Bryson, 2012; The Bill & Melinda Gates Foundation, 2020; Walsh, 2019).

Brunzell et al. (2016a) emphasized that trauma is an overwhelming experience that can undermine the individual's belief that the world is good and safe and that persons that have experienced trauma, either simple or complex, can face long-term damage to neurological and psychological systems that can affect key schooling outcomes. Trauma disturbs the processes used by children, adolescents, and adult students to learn. This can include reduced cognitive capacity, feature inabilities related to cause and effect, the visualization of successful outcomes, seeing the potential in themselves or their situation, learners' lack problem-solving acumen, are unable to focus or pay attention, have self-reflection issues, and are unable to engage in abstract thinking. Harvard's Center on

the Developing Child (2011) asserted that learners with cognitive limits cannot solve complicated problems, make decisions, persist in tedious tasks, make plans, and adjust them when necessary, recognize and correct mistakes, control impulsive behavior, or set goals and monitor progress towards meeting those goals, is paired with reduction of executive function, losses in working memory and cognitive flexibility. Hart and Rubia (2012) considered that abuses and early life stress were associated with cognitive challenges such as low academic performance, a reduced IQ, language deficits, memory as well as issues with attention span (Dutro, 2019; Emdin, 2016; Fisher et al., 2016; Fisher, 2016; Frelin & Poth, 2018; Kerka, 2002; Kisiel et al., 2018; McInerney & McKlindon, 2014; Phifer & Hull, 2016; Siegel & Bryson, 2012; Walsh, 2019).

Andragogy & GED Prep Programs

Andragogy has been described as the "art and science of helping adults learn" (Knowles, 1988, p. 43). It is learner-centric and in contrast to pedagogy which focuses on teacher-dominated learning spaces populated by children and adolescents (Bartle, 2019; Knowles, 1988). Knowles (1988) contended that adult life experience provided significant knowledge from which to build instruction. Bartle (2019) argued that adults could interact with the instructor to craft the most suitable path toward their ultimate literacy goals. Learners who have faced trauma need trusting student-teacher relationships [that] play a critical role in supporting their learning and well-being (Dods, 2013; Ennis & McCauley, 2002). However, this does not necessarily mean teacher-dominated. The teacher becomes a benevolent guide helping the adult learner with specific developmental needs that are self-directed and, within an appropriate time, the responsibility of the adult student (Hiemstra & Sisco, 1990; Knowles, 1988). "Developing human capital" is vital to "bring[ing] about change in economic, social, and educational issues (Chan, 2010; Merriam et al., 2007). Andragogy provides a pathway to that development. It has been connected to a variety of fields such as business, industry, government, and the healthcare profession; with applications in colleges and universities, professional development and training, and adult remedial education (Knowles, 1988). Its use in learning environments where adults are seeking their GED certification is of interest to this investigation.

GED Programs

The General Equivalency Diploma (GED) has been available to learners since 1942 (Zajacova, 2012). The GED was designed to help persons who had left high school to join the military during World War II (Meeker et al., 2008).

"For people who are no longer an appropriate age to enroll in high school, pursuing the GED credential is the best path" forward (study.com, 2020).

Meeker et al. (2008) reported that multiple factors existed for non-completion of high school, among them pregnancy, dysfunctional home or school environments, work, substance abuse, family illness, legal trouble, language barriers, and discipline issues. Neighborhood factors such as poverty and instability are recorded as well (McDermott et al., 2018). Each of these components has been registered previously as trauma-related and each places the student at risk for truncated educational outcomes (Dutro, 2019; Emdin, 2016; Frelin & Poth, 2018; Kerka, 2002; McInerney & McKlindon, 2014; Siegel & Bryson, 2012).

Methodology

This quasi-experimental research, bounded by the following dates: October 21, 2016, and May 28, 2021, analyzed pretest results administered via *ged.com*, the results were evaluated for mean difference effect size (Cohen's *d*) and checked for statistical significance using a paired sample *t*-test. Further evaluation of individual *ged.com pretest* subjects sought additional effects and/or practical significance via a one-way ANOVA. In this instance, *ged.com pretest* scores were grouped by subject matter, math, reasoning and language arts, science, and social studies for analysis. This investigation informed on questions related to the efficacy of trauma-informed literacy practices, such as strong student-teacher relationships and the creation of *felt safety* in learning spaces for adults enrolled in a TXGED program.

Research Design

This quantitative investigation examined the role of trauma-informed literacy practices on adult GED learners, ages 18 and up, in a suburban area, adjacent to a large metropolitan center, in the southwest United States. This research used a one-group pretest-posttest design: $O_1 \times O_2$ (Campbell et al., 1963; Ender, 2005) to assess the efficacy of trauma-informed literacy practices on the participant's *ged.com pretest* scores. All participants were enrolled in the TXGED program during the bounded period. This organization's program provided a non-traditional and flexible path toward GED certification. Its staff is trained in trauma-informed literacy practices before working with learners.

Participants

The participants were selected for the investigation based on enrollment in the organization's TXGED program and comprised a convenience sample with no

control group. All persons contacting the organization are deemed potential TXGED program students. During the evaluation process, some students are ascertained as not viable for the GED prep program. This is usually related to informing of prior significant learning disabilities, not trauma-related, or acute foundational learning issues. Students apprising, during the initial interview, of poor reading or math scores in prior schooling are administered the Test for Adult Assessment (TABE) to establish reading and math grade levels (TABEtest, 2020). Students measured at or below an 8th-grade level in math or reading are not included as GED program participants. Adequate statistical power (41 participants/*ged.com pretest* scores) was reached. There were 57 total participants aged 17 to 63 years of age. Nineteen were males and 38 were females.

Treatment

The organization trains its staff with trauma-informed training modules created in-house by its executive director. The modules cover topics such as W*hat is trauma? What is Trauma-Informed Learning? Trauma's Effects on Learning* and additional modules cover *Secondary Trauma Stress/Compassion Fatigue*, and *Poverty' Effects on Learning*. The treatment, trauma-informed literacy practices associated with strong student-teacher relationships, and the creation of *felt safety*, are contained within the program's processes. Each student is exposed to these tenets during each step of the program. Exposure to the intervention starts with entry into the program and is pervasive throughout.

Step 1: Selecting Participants and Entry into the Program

Enrollment in this study was predicated on the participant's entry into the TXGED program. Clients are asked, via a New Client Intake form, if they agreed to participate in research while attempting their GED certification. They meet individually with the TXGED program manager (PM) to have their interest in obtaining a GED certification verified. The participants' agreeing on a time and place for the initial interview helped create a sense of self-determination for their upcoming educational journey and aided in creating felt safety regarding their future learning environment. Each student has the initial steps for entry into the program explained to them in detail, visually if necessary. The PM sketches out process flows for the student to aid in understanding expectations. The initial interview is conducted with multiple potential students only if all students concerned agree. Each student must create a *ged.com* account to obtain their GED certification; *ged.com* houses the assessment pretests used for determining an enrolled student's study path toward certification.

Step 2: Pretest and Posttest Procedures and Criteria

The entirety of the TXGED program is carefully explained to each student. They receive information regarding each of the 4 GED exams. The exams are stand-alone. There is no mixing of subject matter in any examinations. This allows the student to focus on one subject area at a time. Approaching each exam separately helps students focus their energies, enhances good study practices, and boosts confidence. Upon verified creation of a *ged.com* account, the PM loads (*load* is defined as the organization paying fees associated with pretests or exams) one of the 4 subject area pretests to the student's *ged.com* account. The subject area the students feel most comfortable with is established from conversations between the PM and the student during the initial interview. When a pretest is loaded an email is automatically sent from *ged.com* to the student informing them that their pretest is available in their *ged.com* account. The student is asked to take the pretest in a quiet place, is instructed not to take the pretest on a smartphone, and to notify the PM when completed. If the student scores 150 or above, they are scheduled to sit for the GED exam in that subject matter area and will no longer be considered for research in that subject area. A score of 150 or above demonstrates subject matter knowledge at a sufficient level to pass that GED exam. A score of 145 out of 200 is passing. The organization sets its threshold for exam attempts at 150. This allows for variations in the exam or testing conditions. If the participant's score is 149 or below, they are scheduled for additional exposure to the treatment until deemed appropriate for retesting/posttest. The above procedure, without the initial interview and enrollment procedures, is repeated when it is determined by the PM or the student's tutor that they are prepared for additional subject matter testing.
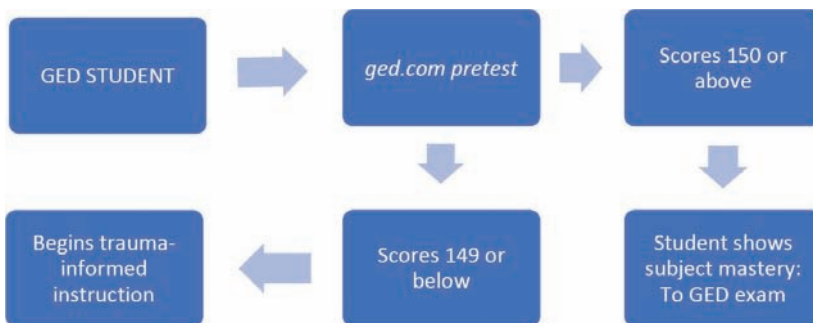

Figure 1 Process Flow for Diagnostic Testing

Students can take the pretests at a place of their choosing. It was suggested that they choose an environment that is conducive to testing such as the organization's offices, a public library, or a quiet place in their homes or workplace. They are asked to be able to set aside the required time, and not stop and start the pretest. The pretests are not proctored. They are informed that the pretest is not used in a pass/fail context but to guide further instruction.

Limitations

In any research project, there are often uncontrollable factors that can alter the study's outcome. Perhaps, the most important limitation in this instance is the exposure time each student had to the program's trauma-informed literacy practices. This was a transient population and participants that do not obtain some form of permanent housing during their enrollment in the program leave the program area in search of that stability. This often reduced their exposure to confidence-building relationships that imbricate the necessity of learning and its pathway to success. This can make data collection hard as some participants take the pretest but do not remain enrolled long enough to take the follow-up posttest.

Analysis

Fifty-seven participants, ages 17 to 63, 19 males, and 38 females took part in the assessment. Each participant may have taken more than 1 pretest. All learners who were enrolled in the TXGED program are legally defined as adults and were at least 18 years old, or 17 years old with a court order or parental permission to attempt the GED. Each was pre-screened by a referring agency or screened upon enrollment for exposure to traumatic experiences.

TABLE 1
Ged.com Pretest and Number of Students that Completed Each Pretest

Ged.com pretests	Number of tests recorded
Social Studies	26
Math	20
Science	18
Reasoning and Language Arts	30
Total tests taken	94

Findings

The data were visually examined for any striking abnormalities. Among the irregularities were extreme variations in *ged.com pretest* scores that suggested great leaps in subject matter comprehension in a short period of time. An example of this would be a participant receiving a 105/200 on a pretest and 175/200 on a subsequent attempt. Seven visible abnormalities of this type were culled from the data set. Data were screened and found to be normally distributed, and all assumptions were met. Important to this analysis was Shapiro-Wilk's valuation of p = .905, signifying no statistical significance.

Paired Samples *t*-Test Research Question 1

A paired sample *t*-test was conducted seeking differences between pretests and posttests on *ged.com* subject area pretests, assessing whether the scores are statistically significant or not. If they are significant, it affirms that the treatment, trauma-informed literacy practices, provided positive outcomes for the students. If they are not, it informs whether the intervention is a tool that offers value for the TXGED program. This test was chosen as the most effective way to assess potential effect sizes between each student's performance on *ged.com pretests* and the program's use of trauma-informed literacy practices (Vogt, 2005; Glen, 2020; & Schwartz et al., 2019).

Research question 1 asked for the comparison of *ged.com pretest* scores both pre-intervention and post-intervention. There was a significant difference from the pretest (M = 141.67, SD = 6.33) to posttest (M = 148.17, SD = 7.64), (M = 6.50, SD = 8.51), $t(-7.16)$ = 87, p = .001 confirming that the TXGED program, and the concomitant trauma-informed instruction/intervention, aided in significant gains in *ged.com pretest* scores for its participating students. Additionally, for practical significance, mean difference effect sizes were compared. Cohen's d = (148.17 - 141.67)/7.017728 = 0.92 (Stangroom, 2021). The effect size d = 0.92 asserts that a large effect exists and those students participating in the TXGED program show significant growth in *ged.com pretest* scores between pretest and posttests.

One-Way ANOVA

A one-way ANOVA was used to analyze sub-question 1a: What effect, if any, does the use of trauma-informed literacy practices have on adult GED students' *ged.com pretest*/posttest scores by subject? *ged.com pretest* subject matter areas were examined, math, reasoning and language arts, science, and social studies.

For this subquestion's analysis, posttest scores were used to assist in interpreting the results of the intervention. Assumptions were tested and met. There was a significant difference between the four subject matter tests [F(3, 90) = 6.23, p = .001]. To further investigate the differences, a Tukey HSD Post analysis was conducted (See Table 2) to determine which subject matter areas performed better in response to trauma-informed literacy practices.

Each of the *ged.com pretests*, pretest, and posttest results associated with the four subject areas-math, reasoning and language arts, science, and social studies were tested for both statistical significance using a paired sample *t*-test and effect size (Cohen's *d*). The result of each analysis is below by subject.

Math

Nineteen students from the TXGED program completed *ged.com pretests* in math, pretest, and posttests. The results of the analysis for *ged.com pretest/* pretest are (*M* = 139.68, *SD* = 7.28) and *ged.com pretest/*posttest (*M* = 145.26, *SD* = 1.95) assert that there was a statistically significant increase from pretest to posttest, *t*(-2.55) = 18, *p* = .020. Additionally, there was a medium effect size of 0.71 (Cohen's *d*).

Reasoning and Language Arts (RLA)

Twenty-eight students from the TXGED program completed *ged.com pretests* in reasoning and language arts, pretest, and posttests. The results of the analysis for *ged.com pretest/*pretest are (*M* = 140.57, *SD* = 6.07) and *ged.com pretest/*posttest post-test (*M* = 146.43, *SD* = 7.23) assert that there was a statistically significant increase from pretest to posttest, *t*(-3.513) = 27, *p* < .002. Additionally, there was a large effect size of 0.88 (Cohen's *d*).

Science

Fifteen students from the TXGED program completed *ged.com pretests* in reasoning and language arts, pretest, and posttests. The results of the analysis for *ged.com pretest/*pretest are (*M* = 144.07, *SD* = 4.83) and *ged.com pretest/*posttest

TABLE 2
Tukey HSD Post Hoc Analysis

Subject area	Subject area	Sig.
Science	Math	.003
	Reasoning & language arts	.001
	Social studies	.027

(M = 153.73, SD = 5.28) assert that there was a statistically significant increase from pretest to posttest, $t(-6.47)$ = 14, p < .001. Additionally, there was a large effect size of 1.91 (Cohen's *d*).

Social Studies

Twenty-six students from the TXGED program completed *ged.com pretests* in reasoning and language arts, pretest, and posttests. The results of the analysis for *ged.com pretest*/pretest are (M = 142.92, SD = 6.25) and post-test (M = 148.97, SD = 7.10) assert that there was a statistically significant increase from pretest to post-test, $t(-3.518)$ = 25, p = .002. Additionally, there was a large effect size, 0.90 (Cohen's *d*).

Discussion

Data analysis supported the assumption that trauma-informed literacy practices create a large effect on *ged.com pretest* scores for students in the TXGED program. Additionally, those students showed significant growth in *ged.com pretest* scores between pretest and posttests. Positive results were present in the one-way ANOVA analysis as well. Findings presented in the medium and large effect size for the analysis of *ged.com pretest*/posttest scores with particular growth in the science subject matter area. Additionally, the assumption that trauma-informed literacy practices are creating an effect and measured statistical significance on the *ged.com pretest* scores of the learners in this TXGED program was validated. The practice of using trauma-informed literacy practices to aid at-risk adult learners is unique to this Texas-based non-profit. The investigator knows of no other program that utilizes teaching methods of this type that are interlaced into the entirety of not only the curriculum but intake and instruction as well. No other specific attempt at merging the two ideas was present in the literature either.

This investigation provided critical quantifiable data from which scholars can begin to make assertions regarding the usefulness of trauma-informed interventions. It has provided not only a research template for examining like mediations, but it has also provided an editable and malleable research model from which to grow the field. For administrators and school officials, it provides demonstrated mechanisms for measuring their trauma-informed efforts at the system level.

The erratic nature of many of the participant's lives, poverty, drug and/or alcohol abuse, probation or other legal issues, lack of mobility, mental health concerns, or homelessness, created the necessity for the reduction of hard lines when it came to behavior issues, scheduled meetings, and homework due dates. This informality created opportunities for relationship growth between teacher and student and caused a reduction of conflict and potential inflammatory

exchanges. It is extremely hard to force-feed education to an adult. And experience acquired during the assessment of this program has reinforced this premise. Many adults simply walked away from conflict or awkward discussions regarding their motives or why they failed to do homework or show up for an exam or tutoring session. This flexible environment may, by necessity, be quite different for younger learners in a more static classroom environment. TXGED's tutors often decided to reschedule tutoring sessions and/or actively worked with the student to find the best time and location for *ged.com pretesting*. This flexibility enhanced the relationship-building aspect of the program.

While the positive effects of a strong student-teacher relationship and the creation of *felt safety* were not questioned in this investigation, finding the best way to produce each was a struggle. Finding the correct mix of carrot and stick was crucial. Incorporating the student's prior learning and current needs was a constant battle. However, this syncretization of past and present was a necessity. Many of the participants had fractured relationships with peers as well as authority figures. Introducing teaching options that did not present as asserting dominance was often critical to success. Working within the participant's defiance issues, inferiority complexes, poor understanding of self-worth, and outright apathy provided a visualization of how working with at-risk adults is realized.

Unexpected Findings

Unexpected findings associated with this analysis are few. However, the lead tutor had a meager math and science background but was strong in history, geography, political science as well as language arts. This enthusiasm for liberal arts often led to students starting with the social studies portion of the GED certification. One-way ANOVA results compared the effects of trauma-informed literacy practices on 4 subject matters, math, reasoning and language arts, science, and social studies *ged.com pretest*/posttest scores. Unexpected was sub-question 1a's ANOVA results which stated that the *ged.com pretest* subject area science, exhibited a large effect size, and presented greater statistical significance related to the analysis of its variable, trauma-informed literacy practices, than the remaining 3 subject matter areas. This was surprising as science-related instruction was not widespread throughout the survey's research period.

Implications and Recommendations for Future Research

The analysis of *ged.com pretest* scores is used by the TXGED program to inform on progress within their program for each student as well as provide support for or against its overall curriculum and best practices of the organization. The intimation that trauma-informed literacy instruction aids students who have

faced barriers to moving forward in their educational journey is indicated in the analysis of the data. Both effect size and statistical significance markers provided evidence of this. There was ample evidence for an acknowledgment of trauma-informed literacy practices as an intervention in helping trauma-affected learners move through adult learning programs. New students in the TXGED program and potential learners in other andragogical spaces may move forward in a significant way.

Future research should seek to provide input from a larger pool of students and investigators should build into the methodology a strong measurement of time exposed to the intervention. Possibly tracking time in the program to better assess exposure to the program's main tenets. Also, it must be noted that the organization's one-on-one instruction model has been shown to cause increases in outcomes not always related to trauma-informed practices (Grasha, 2002). Additionally, a qualitative component could be added to any future investigation to garner the impressions of both the staff and students on the efficacy of trauma-informed instruction and whether they felt it added or subtracted to their educational outcomes.

Conclusion

Trauma-informed literacy practices are an increasingly acknowledged necessity for learning spaces the world over. The dearth of research associated with academically reproducible investigations is an issue as well. The trauma-informed literacy practices of building strong student-teacher relationships and the creation of *felt safety* are critical components of constructing a classroom where learning is viable. This investigation has helped to inform on all three of these key issues. By adding to the body of knowledge associated with trauma-informed literacy, especially in providing results that are subject to peer review, this study filled gaps in current trauma-informed scholarship. The assessment of the TXGED program has provided scholarship as well as instructors inhabiting andragogical spaces, with a template from which to build successful trauma-informed literacy programs. The positive effects recorded by this quantitative analysis should provide hope for instructors and curriculum designers who want to make changing the narrative the norm for their at-risk and disempowered students.

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